

2809 AUGUST 11, 1945

Railway Age

Per
Founded in 1856



WINE RY APPL CO TOLEDO
HF-62 A PAT'D

**... OVER
62 LEADING
RAILROADS
ARE NOW USING**


THE LIBRARY OF
CONGRESS
SERIALS ACQUISITION
AUG 23 1945



Cast Steel
**HOPPER
FRAMES**

THE WINE RAILWAY APPLIANCE CO.

TOLEDO 9, OHIO



There's only one spot on your golf ball that can transform the power of your stroke into a long, straight drive — the radial line to the center of the axis.

GOLF

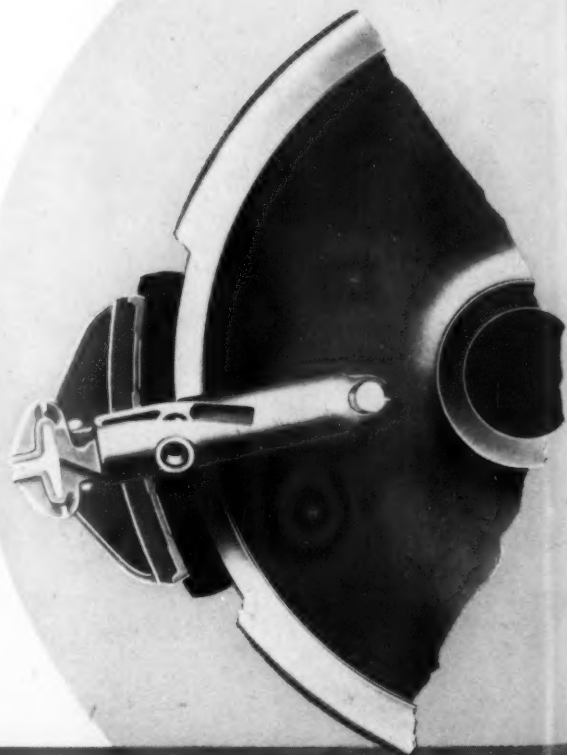
or

BRAKE BEAMS

It's "Center-Line" Action That Counts

And there's only one spot on a freight car wheel that can transform braking power into perfect deceleration — the same radial line to the center of the axle.

Unit Brake Beams hit that spot always — eliminate toggle action, wheel slip, chatter and grab — tremendously extend both wheel and brake life.



UNIT TRUCK CORPORATION

140 Cedar Street

New York 6, N. Y.

MINER

Friction Draft Gears

STURDY IN CONSTRUCTION

POSITIVE IN ACTION

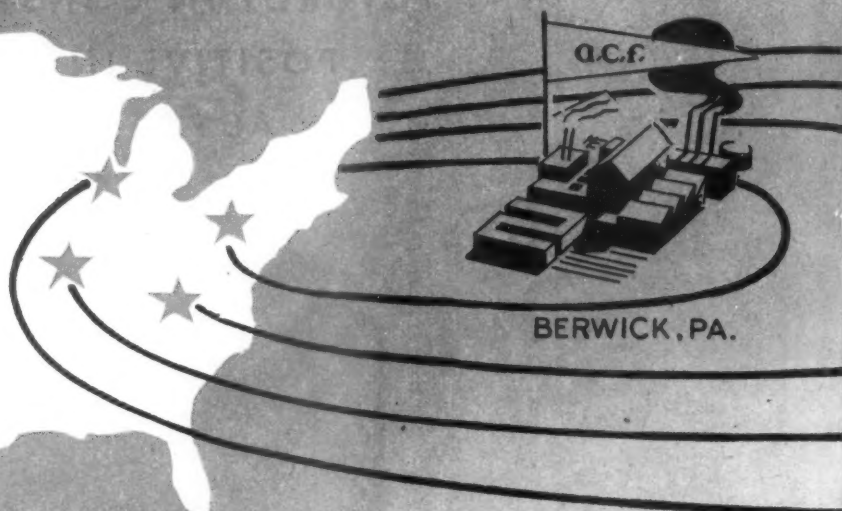
ABSOLUTELY RELIABLE



W. H. MINER, INC. CHICAGO

Published weekly by Simmons-Boardman Publishing Corporation, 1309 Noble Street, Philadelphia, Pa. Entered as second class matter, January 4, 1933, at the Post Office at Philadelphia, Pa., under the act of March 3, 1879. Subscription price \$6.00 for one year U. S. and Canada. Single copies, 25 cents each. Vol. 119, No. 6.

August 11, 1945



GEOGRAPHY and

A.C.F. is justly proud of the "AND FOUNDRY" part of its name — notably reflected in its volume production of chilled car wheels.

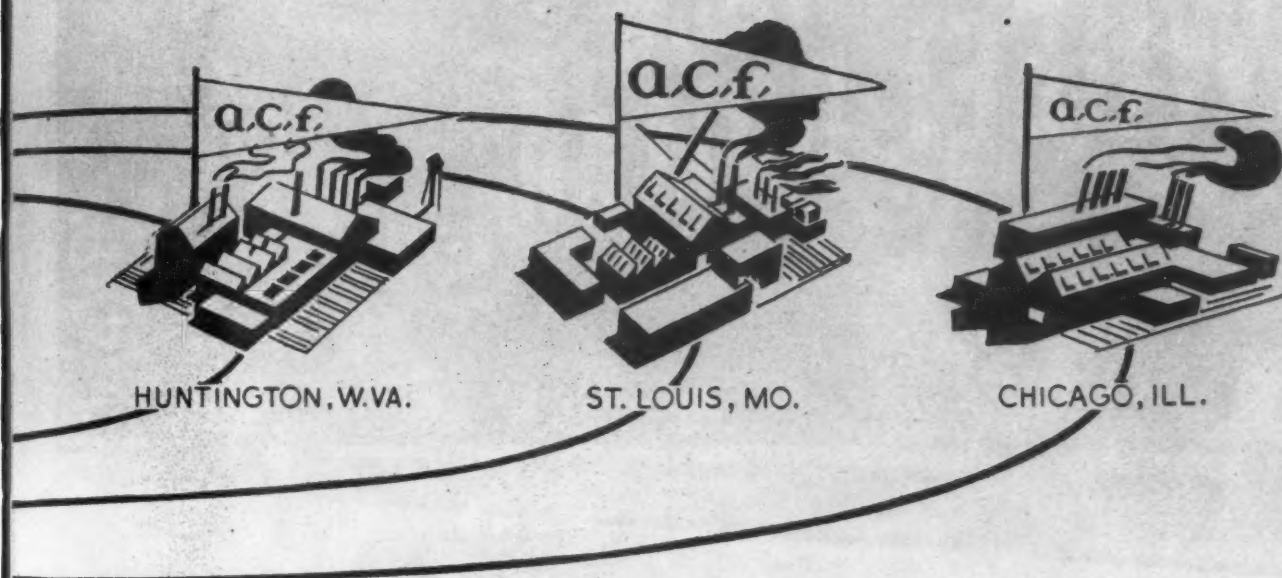
With chilled wheel plants at Berwick, Pa.; Huntington, W. Va.; Chicago, Ill. and St. Louis, Mo., more than 50% of U.S. rail mileage is less than 500 miles distant from an A.C.F. plant — assuring prompt delivery to railroads everywhere.

a.c.f.

AMERICAN CAR AND FOUNDRY COMPANY

New York • Chicago • St. Louis • Cleveland • Washington • Philadelphia • Pittsburgh • St. Paul • San Francisco

WHATEVER A.C.F. MAKES . . . IT IS KNOWN TO MAKE WELL!



Skill alike say...

A.C.F. FOR CHILLED CAR WHEELS

A.C.F. chilled car wheels are made to the most exacting standards.

Technical controls include:

- 1** Close control of chill by use of numerous test blocks throughout each heat.
- 2** Complete chemical analyses of test blocks and finished product from each heat.
- 3** Full control of temperatures from melting through the annealing cycle.
- 4** Years of skill backed up with final check by instrumental means, assures finest quality, long wearing tread metal.

In the Thirties, wheels accomplished an average of 47,900 gross ton miles per year; in 1944 service rose to 102,500 gross ton miles. By increasingly severe tests and controls, chilled car wheels took this added burden in stride. Small wonder, therefore, that of 16,500,000 wheels of all types in critical war time service — 80% are chilled car wheels!



Go farther

It is deceptive to assume that first cost is necessarily the yardstick of wheel value.

There is one way, and one way only, to accurately calculate wheel expense: that is, on a cost-per-mile basis, including maintenance.

On this sound footing, many thousands of Bethlehem one-wear Wrought-Steel Wheels are proving their economy in freight traffic. They are proving it the hard way, too . . . under the wear and tear of today's higher speeds and punishing loads.

The Bethlehem manufacturing process makes it possible to eliminate many common defects in railroad wheels. This is reflected in longer life, hence lower haulage costs. As you follow the trend to wrought-steel wheels, always specify Bethlehem—both for your wheels and your axles in freight, passenger, and locomotive service.



BETHLEHEM Wrought-Steel WHEELS

AND FORGED-STEEL AXLES

ARTHUR GOIENS, THE PORTER

Mrs. Mary Helling's husband had gone to war. He was stationed at Camp Breckenridge, Ky., across the Ohio River from Evansville, Indiana. Young Mrs. Helling traveled alone from Hillsdale, Mich., to see her too long absent soldier.

When she parted from her husband at Camp Breckenridge, she did not know when she might see him again.

Tired and distraught while changing cars in Chicago, she lost her billfold and all her money—\$96. At Elkhart, Ind., she had a five-hour wait, in the night, before catching her New York Central train to Hillsdale.

The New York Central porter at Elkhart said: "Excuse me, Madam, but you maybe will be having some lunch?"

"Thank you," she replied. "But I had a lunch in Chicago."

"But, you look tired, Madam," he suggested.

This attention prompted Mrs. Helling to admit that all her money had been lost in Chicago.

"Then, if you please, you must go to the restaurant, eat all you want, and let me pay for it," the porter urged her. "There will be quite a wait before your Hillsdale train gets in."

She accepted this offer—ate a sandwich and drank a coke. The porter took her hand baggage and led her upstairs to the station telephone operator and said: "Please let this lady lie down and rest, until I call her for the Hillsdale train."

When Mrs. Helling told this little story to her father, Charles M. Stone, he set out to identify the Elkhart porter, whom she had heard addressed as "Art".

To Superintendent F. H. Garner, of the New York Central at Chicago, Mr. Stone wrote: "This porter did all this knowing she had no money with which to pay him. If the railroads had more employees like this, they wouldn't have to worry about future business."

Mr. Stone finally located his man, thanked him by letter, and enclosed reimbursement. He still has a letter, in part reading: "I was happy to be of assistance to one of your family . . . We of the New York Central feel that service is a part of our duties to patrons. Those traveling on our lines are our guests and should be treated as such. Arthur Goiens, The Porter."

—The Trackwalker*

★ ★ ★

Alco



In main line service on a western road, 3 Alco-G.E. diesel-electrics have released 5 steamers, thus amplifying the road's capacity to absorb the additional westbound traffic occasioned by the final drive on Japan.



AMERICAN LOCOMOTIVE • GENERAL ELECTRIC

Copr., 1945, American Locomotive Company and General Electric Company

*Reg. U. S. Pat. Off.

119-145-0000

Unnecessary . . . THEN . . .



Westinghouse

FOR OVER SIXTY YEARS
THE BEST KNOWN NAME IN

but *Desirable* . . . NOW

TO PROVIDE CONVENIENCES — EXPECTED BY PASSENGERS

The New Westinghouse Motor Alternator . . . for conversion of direct to alternating current

For economical and efficient operation of modern passenger car conveniences, such as fluorescent lighting . . . water coolers . . . Precipitron . . . electric razors and other electrical equipment . . . alternating current is practically a necessity. Modern Railroads find the Westinghouse Motor Alternator indispensable for the conversion of direct current to alternating current.

The Westinghouse Motor Alternator provides power conversion in one package, compact, lighter in weight and giving more power with no increase in size. The Westinghouse Motor Alternator requires no replacement of parts and passes all specification standards for successful power conversion equipment.

Westinghouse design and construction includes all basic features which have been time-tested and demonstrated as essential for highly satisfactory operation in railroad service. Performance meets the unqualified approval of lamp manufacturers as surpassing their rigid requirements established to insure maximum lamp life.

J-95104

WESTINGHOUSE PRECIPITRON AIR CLEANING

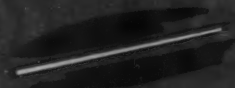


WESTINGHOUSE WATER COOLER



WESTINGHOUSE
FLUORESCENT LIGHTING

RAZOR-RADIO
ELECTRIC OUTLETS



CONSULT WESTINGHOUSE . . . Ask your Westinghouse office for a copy of "Development of Electrical Equipment for Standard Railroad Passenger Cars—Type XF-41 Motor Alternator", or write Westinghouse Electric Corporation, P. O. Box 800, Pittsburgh 30, Pennsylvania.



MODERN RAILROADS

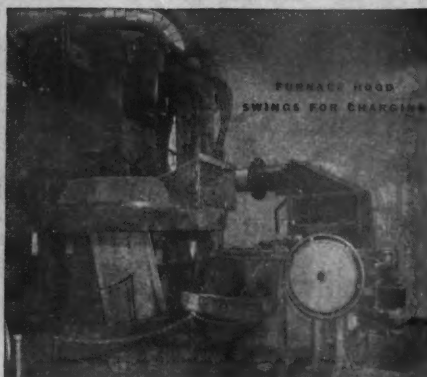
DEPEND ON

WESTINGHOUSE

Motor Alternator

Railroad Electrical Equipment

DUST CONTROL FOR ELECTRIC FURNACES



The patented AAF furnace hood in combination with Type W Roto-Clone insures positive dust and smoke control with a fraction of exhaust volumes used with general ventilation. Hood design is varied to suit the type and make of electric furnace on which it is to be used—either side or top charge. Roto-Clone maintains practically constant inflow of room air to hood regardless of gas temperature to obtain positive control during the entire melting cycle. Send for complete information and Bulletin No. 278.

Roto-Clone's record of positive dust control at every foundry operation is the result of years of dust engineering experience. Roto-Clones are available in three Types—Type W (wet) for general foundry dust control, particularly at shakeout, sand conditioning and abrasive cleaning; Type D (dry) for grinding and snagging; Type N (Hydro-static) for the safe collection of hazardous magnesium dust. Write for bulletins.

SHAKEOUT DUST CONTROL MADE EASY



AAF-engineered side hoods exhausted by Type W Roto-Clones offer the most practical method of dust control for large shakeouts served by overhead cranes. The strong indraft from the Roto-Clone diverts the dust and fumes and prevents their dispersion to the surrounding work area. A minimum of space and piping to collect, store and precipitate the dust is required. Send for Bulletin No. 274A.

ANOTHER
AAF
PRODUCT

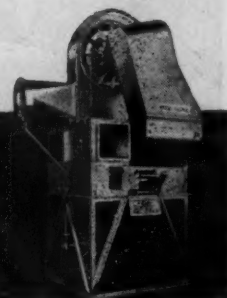
AMERICAN AIR FILTER COMPANY, INC.
INCORPORATED

111 Central Avenue

Louisville 8, Ky.

In Canada: Darling Bros., Ltd., Montreal, P. Q.

ROTO-CLONE
FOR FOUNDRY DUST CONTROL



**TOMORROW'S
POWER
TODAY!**

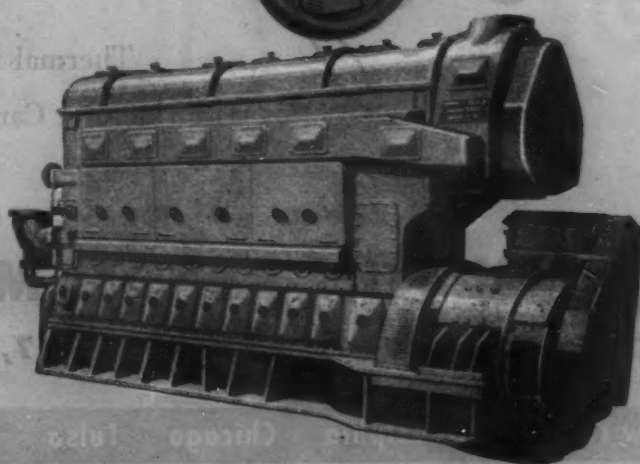


It's the
**Opposed-Piston
Diesel Locomotive**

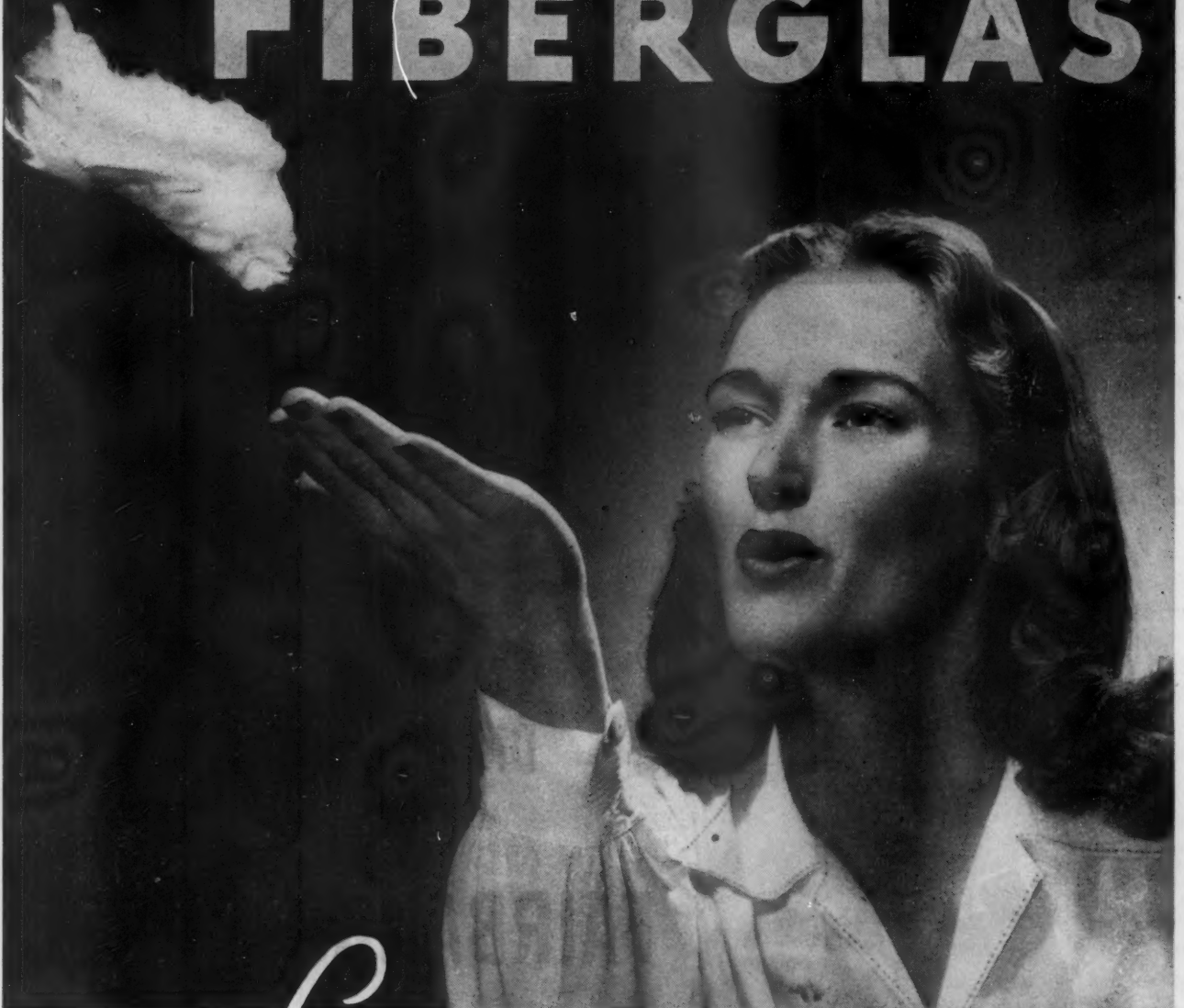
by

FAIRBANKS-MORSE

A name worth remembering



FIBERGLAS*



* Trademark Reg. U. S. Pat. Office
by Owens-Corning Fiberglas Corp.

is *Light* in weight

Thermal insulations for Passenger Cars,
Refrigerator Cars, Tank Cars and Locomotives.

Fiberglas is sold to Railroads and Car Builders exclusively by*



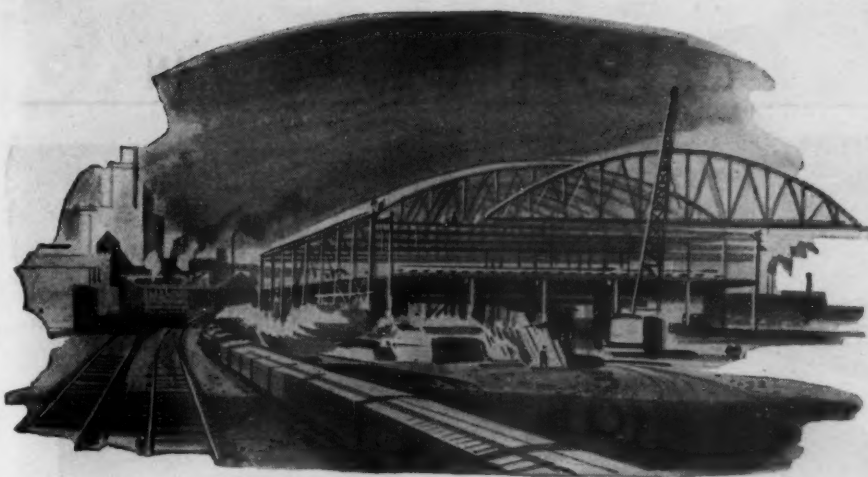
ESTABLISHED 1898

GUSTIN-BACON MFG. COMPANY

KANSAS CITY 7, MISSOURI



New York Philadelphia Chicago Tulsa Houston Fort Worth San Francisco

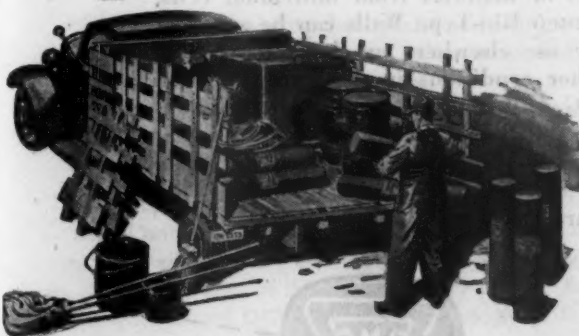


Wood's now made Fire Retardant

A high degree of fire retardance can be given to wood structures by pressure treatments. Timber members treated by Koppers Wood Preserving Division can be completely pre-framed and "engineered" for easy erection, just like any other structural material.

KOPPERS

and the
Railroads



Coal Tar Pitch's "Cold Flow" Adds Years to Roof Life

Weathering, expansion and contraction, and unavoidable settlement of a building may cause small cracks to occur in the surface of a roof. Coal tar pitch roofing materials have a property called "cold flow" which makes these cracks heal themselves automatically. Use Koppers Coal Tar Pitch for your roofs.



War Developments in Bronze Foundry Practice help Locomotive Main Cylinders

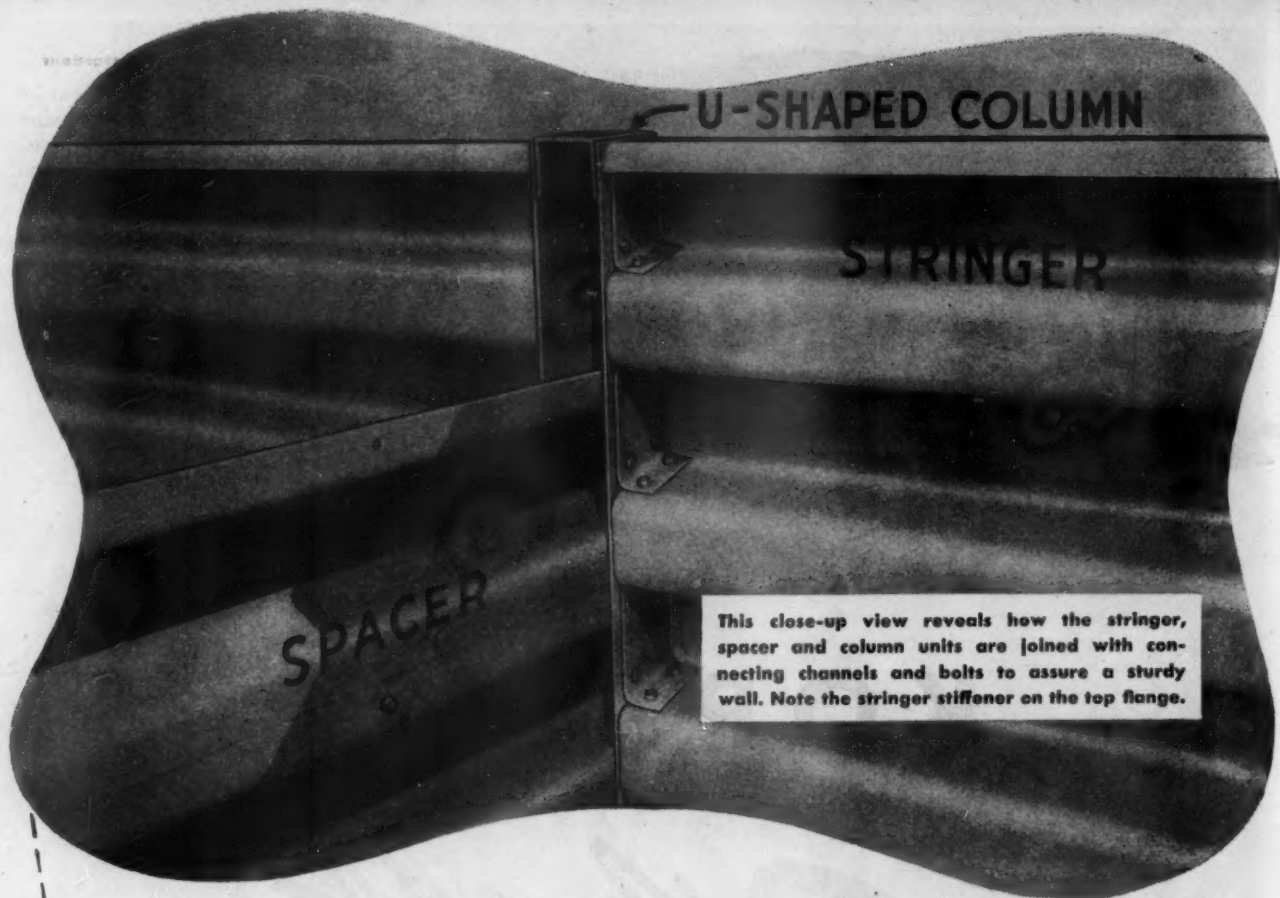
American Hammered Piston Ring Division of Koppers has built a highly-mechanized bronze foundry which produces better bronze castings. These castings help to give longer life to main cylinder packing for locomotives.

Koppers Company, Inc., Pittsburgh 19, Pa.

KOPPERS

THE INDUSTRY THAT SERVES ALL INDUSTRY

Buy War Bonds . . . and Keep Them!



This close-up view reveals how the stringer, spacer and column units are joined with connecting channels and bolts to assure a sturdy wall. Note the stringer stiffener on the top flange.

STEEL WALLS THAT *TAKE THE "BITE"* OUT OF EROSION

Only the passengers get a thrill out of high embankments that skirt the edges of rivers, lakes, and adjacent roadways. To railroad men these slopes bring nothing but headaches. They are easy prey for sharp-biting erosion and other unstable conditions.

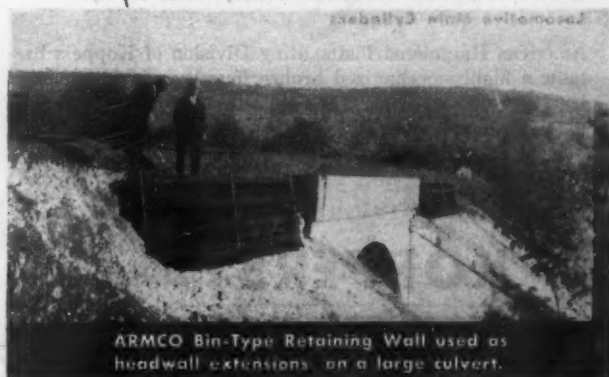
Many maintenance engineers solve these problems by installing ARMCO Bin-Type Retaining Walls.

These sturdy walls overcome unequal settlement without cracking or bulging.

They are so easy to erect that unskilled men can do it in any season, with less excavating. Backfilling is done as the work progresses, to prevent undermining during construction.

Economy and efficiency go hand-in-hand. Closed bin construction prevents loss of material from individual cells. ARMCO Bin-Type Walls can be salvaged for use elsewhere or changed to meet other conditions in the same location.

Get all the facts about ARMCO Retaining Walls. You'll find them a money-saving remedy for war-beaten roadbeds. Write Armco Railroad Sales Co. Inc., 2641 Curtis Street, Middletown, Ohio.



ARMCO Bin-Type Retaining Wall used as headwall extensions on a large culvert.



ARMCO BIN-TYPE RETAINING WALLS

Heavy on the drawbar



One of the Frisco's six "Caterpillar" Diesel-powered locomotives operating in Neodesha, Kansas.

Light on the budget

During the past two years the Frisco Line has purchased six "Caterpillar" Diesel-powered 44-ton locomotives. Two operate in the yards at Memphis, Tenn., while single units are stationed at Cape Girardeau and Joplin, Mo., Neodesha, Kans., and Hugo, Okla.

All have shown the same characteristics of high availability, low operating costs, minimum repairs and fast, easy handling of freight. In addition to these advantages, high initial tractive effort starts big loads smoothly and accelerates them rapidly.

These qualities made it possible for the two 44-tonners in the Memphis yards to replace four steam locomotives. The Diesel units run 16 to 24 hours per day during a 6 or 7 day week with roundhouse inspection at bi-monthly intervals. After 1½ years of this near-capacity service, the two "Caterpillar" Diesel D17000 engines in the oldest locomotive were opened for inspection. New piston rings were the only replacements needed.

Fuel consumption has matched repair economy. 3½ to 4½ gallons of low-cost Diesel fuel has been the average hourly consumption of these locomotives since they have been on the job.

No matter how you look at it, "Caterpillar" Diesel-powered 44-ton locomotives are great values for way freight and switching service. They can be obtained from all the leading builders. They are backed by the records of tens of thousands of engines on the world's toughest jobs plus the finest dealer parts and mechanical service in the industry. They are a 9-to-1 choice over all other power-plants combined for this class of service. That's why they have so much to offer your line.

CATERPILLAR TRACTOR CO. • PEORIA, ILLINOIS



THE DISCHARGED VETERAN WEARS THIS EMBLEM.
REMEMBER HIS SERVICE AND HONOR HIM.

CATERPILLAR DIESEL ENGINES

REG. U.S. PAT. OFF.

TRACTORS • MOTOR GRADERS • EARTHMOVING EQUIPMENT

How UP-TO-DATE are you



Length over pulling face
couplers 44' 4"
Length inside..... 40' 6"
Length truck centers 30' 4"
Width extreme over all
(door fixtures) . . . 10' 7 1/4"
Width over frame .. 9' 9 5/8"
Width inside 9' 2"
Height from rail to
top running board. 14' 11 3/4"
Height rail to floor . 3' 7 3/4"
Height inside. 10' 6"

Clear height
door opening 9' 10 11/16"
Clear width d. o. 6' 0"
Contents—cu. ft. 3,900
Capacity 100,000 lbs.
Light Weights, ready for service:
With swing motion trucks—
Barber S-4-L ... 42,900 lbs.
With freight trucks—
Barber S-2 37,000 lbs.
With freight trucks—
Cardwell snubbers 38,000 lbs.



REYNOLDS

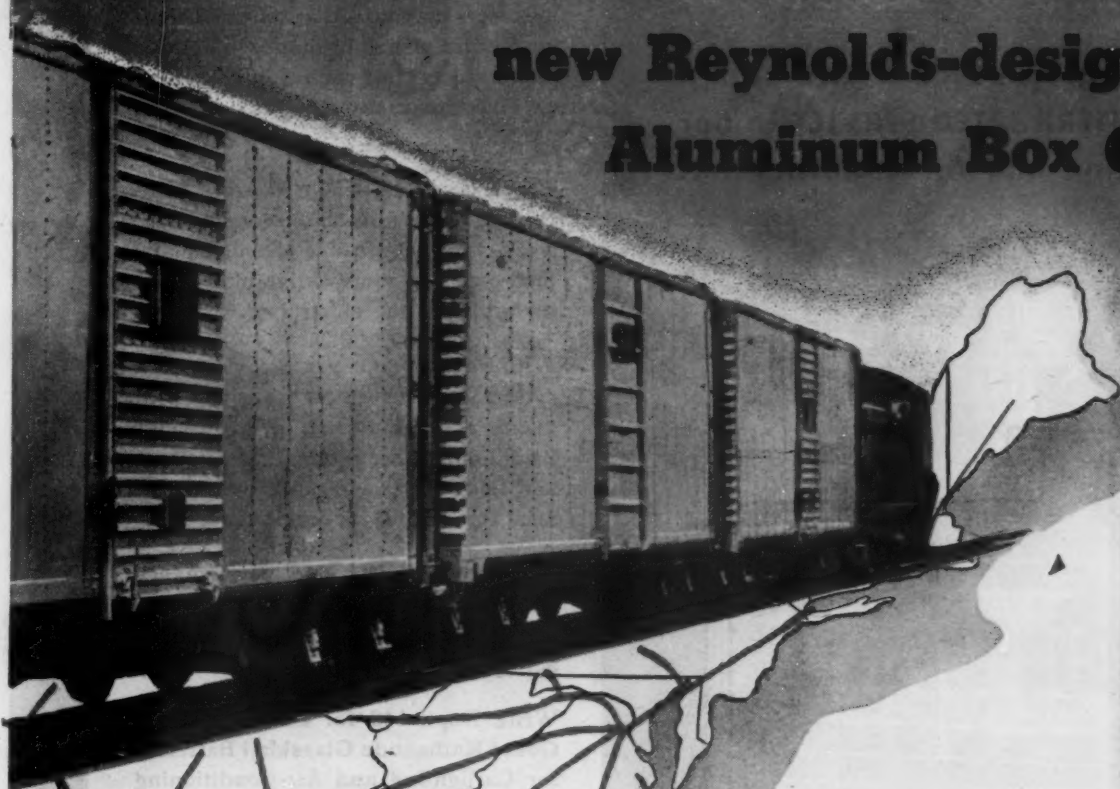
*The Great New
Source of*

ALUMINUM

INGOT • SHEET • SHAPES • WIRE • ROD • BAR • TUBING • PLATE • FORGINGS • CASTINGS • FOIL • POWDER

on ALUMINUM?

Railroads all over the U. S. acclaim new Reynolds-designed Aluminum Box Cars



A. A. R. APPROVED! These new aluminum box cars designed by Reynolds—are now rolling the rails. Thanks to R301, the tough, battle-tested Reynolds alloy, it has been possible to build these revolutionary new box cars from the floor up, *entirely of aluminum*, combining a saving in weight of 4½ tons with great structural strength.

These cars are lighter than conventional cars. When equipped with A.A.R. approved trucks for passenger service, they can be cut into trains with speed in excess of 85 m.p.h. Cars for freight service have reduced weight up to 9000 pounds, pull easier, resulting in savings of fuel for train and switching service. Pay load can be increased.

And the superior corrosion-resistance and toughness made possible by great new Reynolds alloys, mean longer life and lower maintenance costs. Today Reynolds alloys make practicable improved cars for *all* types of rolling stock, including the Reynolds-designed 50-ton 3 Hopper Cars, "Day-Night" Passenger Coaches, and Refrigerator Cars.

Reynolds Railway Supply Division invites inquiries. Blueprints available for interested railway executives. Reynolds Metals Company, Railway Supply Division, 310 Michigan Boulevard, Chicago 4, Illinois.

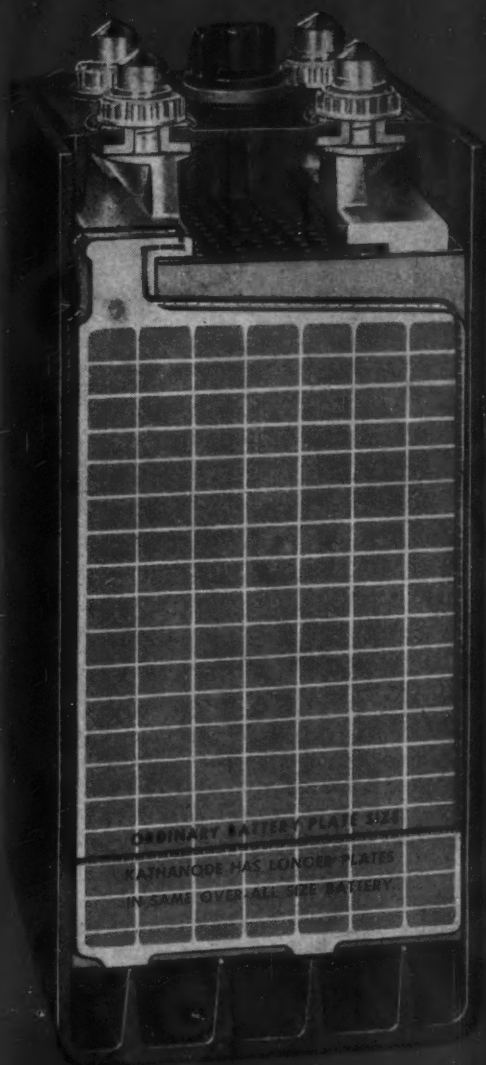


KATHANODE

HAS MORE WORKING

Active Material

To give LONGER LIFE and
UNINTERRUPTED SERVICE in Car
Lighting and Air Conditioning!

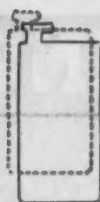


GOULD

PIONEER OF GLASSKLAD CONSTRUCTION

GOULD STORAGE BATTERY CORPORATION

Branches: N. Y., Boston, Atlanta, Chicago, St. Paul, Denver, Portland, Seattle, San Francisco, Los Angeles, New Orleans, New York, St. Louis, San Diego, Salt Lake City, and Toronto.



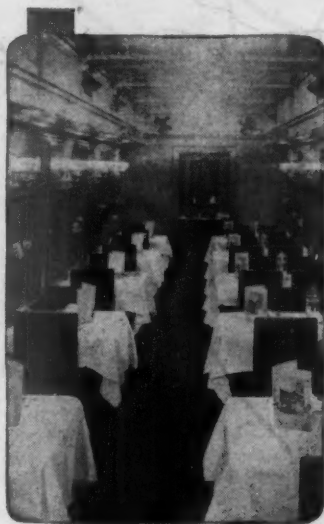
Powered by Kathanode your electrical system is maintained at 100% efficiency. Undiminished brilliancy in lighting and unfluctuating cooling of passenger cars are an assured service to your patrons.

The Kathanode design reduces sedimentation, permits shallower sediment wells, making possible a longer plate, thus exposing more active material to the action of the electrolyte.

With Kathanode, therefore, your work cycle is less severe on the power-producing active material. This provides a minimum of wear, maximum voltage and 100% sustained capacity performance throughout its service life.

Kathanode design and performance have been proved in railroad service, as its record based on 20 years of actual field operation will attest.

Write Dept. 148 for Catalog 800 on Gould Kathanode Glassklad Batteries for Carlighting and Air-Conditioning Service.





Katy Reduces Mortgage Debt

For railroads as well as for individuals, today is the right and patriotic time to save . . . to reduce mortgage debts . . . to protect against the future. It is just as sound and satisfying to the owners of a railroad as it is to a home owner to free himself of burdensome mortgage debt.

The Katy has backed this firm conviction with approximately \$40,000,000 of its mortgage bonds purchased, retired and cremated since December 31, 1941—a 43% reduction in mortgage debt within four short years!

Reduction of mortgage debt is interest saved. With the retirement and cancellation of

\$40,000,000 of bonds the Katy has reduced its mortgage interest charges approximately \$1,900,000 annually—the equivalent of lower operating costs.

To effect such savings is to run a railroad more economically and efficiently. Any thrifty property owner who has watched his mortgage diminish will readily understand that *sound financing* goes hand in hand with *sound management*.

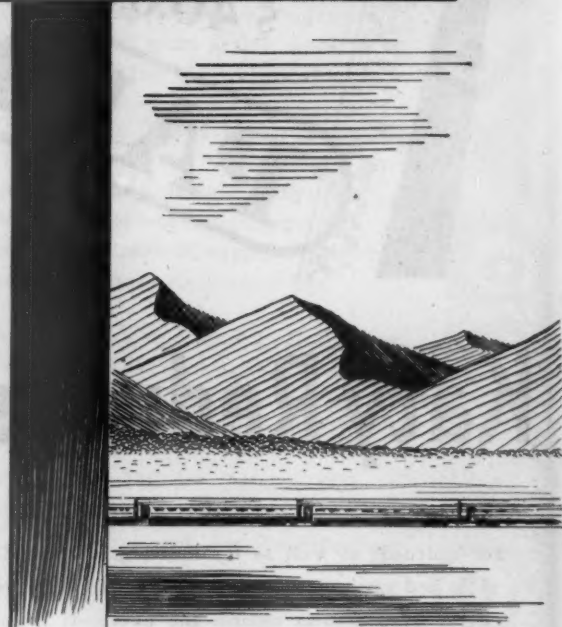
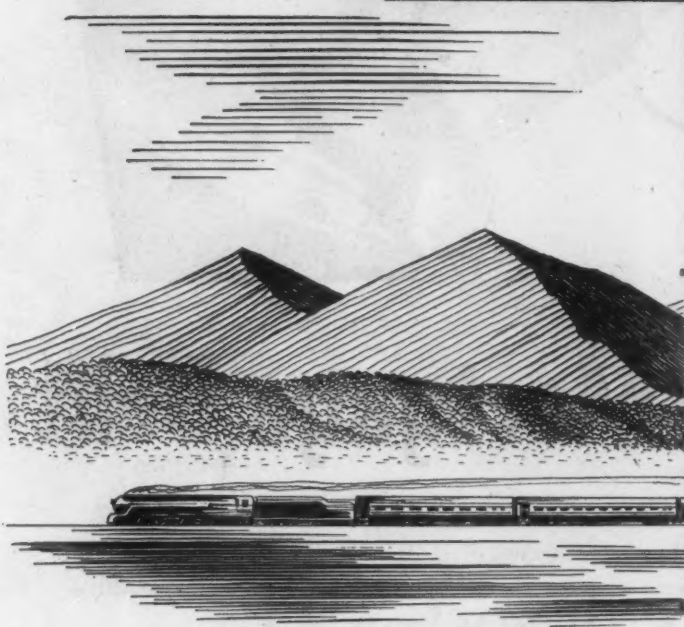
With its financial house in order, the Katy faces the future with strength and confidence—better able to build for and serve the greater needs of the growing Southwest—and better able to protect the interests of its owners, the stockholders.



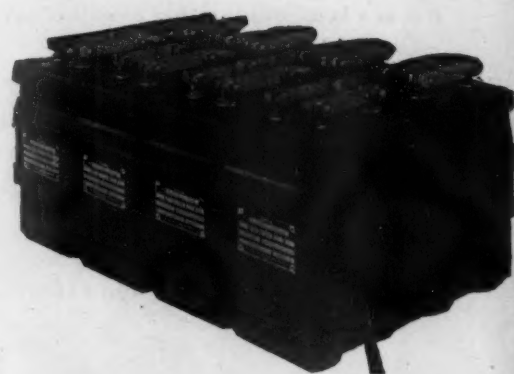
MISSOURI-KANSAS-TEXAS

RAILROAD COMPANY

EXIDES ON THE WESTBOUND HEADED FOR THE "FAR EAST"



The long expected, long planned for traffic shift is under way. War goods and war personnel are now speeding westward across the plains and through the Rockies, all set and eager for the knock-out punch. The heavy strain on rolling stock is still severe, and may grow worse. But on those thousands of coaches and Pullmans that are Exide equipped, trustworthy battery service is assured. Exide power and ruggedness will prove equal to the added hardships that must be met. Lights will continue to glow brightly and air-conditioned cars will remain comfortably cool, even during long stops. You can always count on Exides for dependability, long-life and ease of maintenance.



Exide
BATTERIES

THE ELECTRIC STORAGE BATTERY COMPANY, Philadelphia 32

• Exide Batteries of Canada, Limited, Toronto

"Your helpful technical assistance saved us considerable expense and prevented a serious delay"

... a comment from a manufacturer regarding Airco Engineering Service



MANY such letters in our files reflect a fact known by users of Airco oxygen — individualized, technical aid is an extremely valuable part of Airco's *complete* oxygen service.

Experienced Airco engineering representatives are "on call" throughout the nation. Their job is to aid Airco customers make most effective use of Airco oxygen.

Write for an interesting free booklet "Oxygen — Indispensable Servant of Industry". Address Department A at the New York office.



AIR REDUCTION



General Offices: 60 E. 42nd St., NEW YORK 17, N. Y.

In Texas: Magnolia Airco Gas Products Co. • General Offices: Houston 1, Texas

Offices in all Principal Cities

AIRCO OXYGEN GUARANTEED **99.5%** PURE
IN THE CYLINDER

SO DEPENDABLE THEY GIVE A

SECOND LIFE



Electrically operated luxuries and conveniences on post-war cars will certainly be a major factor in attracting patronage and providing utmost passenger comfort — especially if they are backed up by an adequate standby power supply of highest dependability. You get this kind of power insurance — and save weight too — when cars are equipped with Edison Alkaline Batteries.

Their unequalled dependability in railway-car service is indicated by the fact that a number of railroads are getting a "second life" from their alkaline batteries. After delivering normal service life in 32-volt, 64-volt or 110-volt systems on passenger cars, the batteries are often regrouped and installed on baggage, express or other cars, and even in stationary services, having lighter load demands. In these "new" applications, they give additional years of unflinching service. Thus, in effect, the railroads get new batteries *free*. The fact that this is possible demonstrates that alkaline batteries remain dependable power units beyond their normal service life. This is a good point to bear in mind when selecting batteries for present or future passenger equipment.

Edison Storage Battery Division of Thomas A. Edison, Inc., West Orange, N. J.



Edison
THE LIGHTWEIGHT BATTERY
FOR LIGHTWEIGHT CARS

Light-weight cars call for light-weight electrical equipment. Alkaline batteries save weight where it counts most — near the middle of the car. The larger the kw-hr. capacity, the greater the weight that is saved by using alkaline batteries.

161

Repor

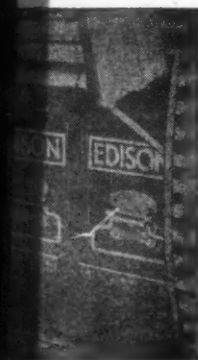
6

icol
ere
The
ight

161

August 11,

LIFE



war cars will cer-
providing utmost
adequate standby
power insurance—
Alkaline Batteries.
s indicated by the
from their alkaline
64-volt or 110-volt
ed and installed on
ices, having lighter
additional years of
teries *free*. The fact
remain dependable
good point to bear
essenger equipment.
West Orange, N. J.

Edison
LIGHTWEIGHT BATTERY
LIGHTWEIGHT CARS

cars call for light-weight electrical
alkaline batteries save weight where
it—near the middle of the car. The
hr. capacity, the greater the weight
by using alkaline batteries.

Report **No. 14** on the latest advance in railroad communications



**V.H.F.
RADIO**

the performance proved railroad radio communication system

V.H.F. (Very High Frequency) radio for railroads has successfully passed through its apprenticeship and thoroughly proved its right to be called the latest and greatest advance in railroad communications.

Results of over 100,000 test miles—under actual operating conditions... in all types of terrain... through hail and sleet, thunder and lightning—have shown Bendix that V.H.F. radio systems are the answer to railroad communication problems.

V.H.F. offers railroads a low cost communication system with the following advantages—freedom from atmospheric noise—restriction of communication to the desired area—elimination of clearance problems through use of compact, efficient antennas.

For further information on the Bendix V.H.F. System of railroad communication, write Bendix Radio Division, Baltimore 4, Maryland.

Listen to "MEN OF VISION" Sundays 7 P.M. E.W.T. CBS.



Bendix Radio DIVISION

BENDIX RADIO

BALTIMORE 4, MARYLAND



TRUSCON WELTRUS HIGHWAY CROSSINGS

-track-tested by the nation's leading railways!

Truscon Weltrus Steel Crossings provide a permanent crossing combining strength, durability and economy, with extreme simplicity of design. Weltrus track sections are made of rolled steel channels, ribbed at the side with the section ends completely closed. The center reinforcing bar web, sides and ends, are electrically welded into a homogeneous unit. Instead of the armoring being anchored into the concrete, the concrete is actually anchored into the armoring, thus eliminating all possibility of the armoring loosening and causing the disintegration of the concrete.



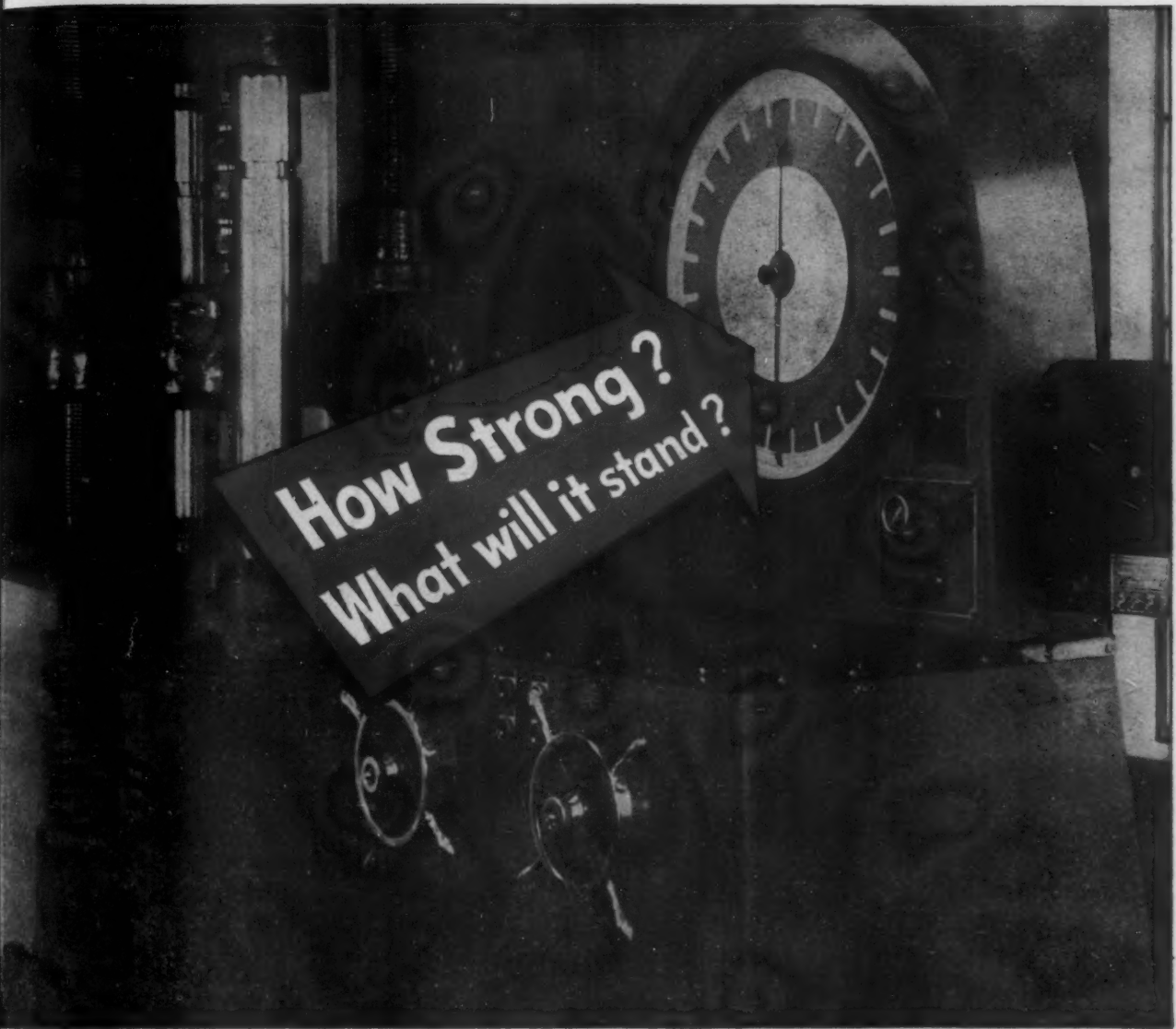
*Not available
until our wartime
obligations are fulfilled.*

Truscon construction engineers will gladly give you complete information on Weltrus Crossings for your postwar projects.

TRUSCON STEEL COMPANY • Youngstown 1, Ohio
Subsidiary of Republic Steel Corporation

TRUSCON

WELTRUS CROSSINGS



**How Strong?
What will it stand?**

**...it pays to
*Know!***

There's an absolute minimum of guesswork about the service qualities of steel castings produced by PSF. The tensile testing machine with stress-strain recorder, above, is only one evidence of the rigid laboratory control maintained over all PSF work, from the furnace on. That's your assurance of dependability. We want to know, and you must know!



47 YEARS OF STEEL CASTING KNOWLEDGE

Pittsburgh
STEEL FOUNDRY CORPORATION
GLASSPORT, PA.

Sales Offices: NEW YORK • PHILADELPHIA • WASHINGTON AND CHICAGO

W&D 9381

August 11, 1945

25



**KERITE FOR
RAILWAY SIGNAL
SERVICE,
RICHMOND,
FREDERICKSBURG &
POTOMAC RAILROAD**



THE KERITE INSULATED WIRE & CABLE COMPANY INC
NEW YORK CHICAGO SAN FRANCISCO



Pioneers in Cable Engineering

WHICH

OIL

DO YOU USE?



-OR HARD-WORKING **TALPEX** THAT LUBRICATES AND DOES 4 EXTRA JOBS?



An oil that merely lubricates—or that does only one or two of the other critical jobs in your engines—is a lazy oil. With today's operating conditions . . . the high cost of repairs . . . the scarcity of good spare parts . . . you simply can't afford to use a lazy oil.

To get the utmost in performance from your engines, use hard-working Shell TALPEX. This versatile oil has *all* the properties needed to do the many critical jobs necessary to keep your engines running smoothly and efficiently under the most severe operating conditions.



TALPEX

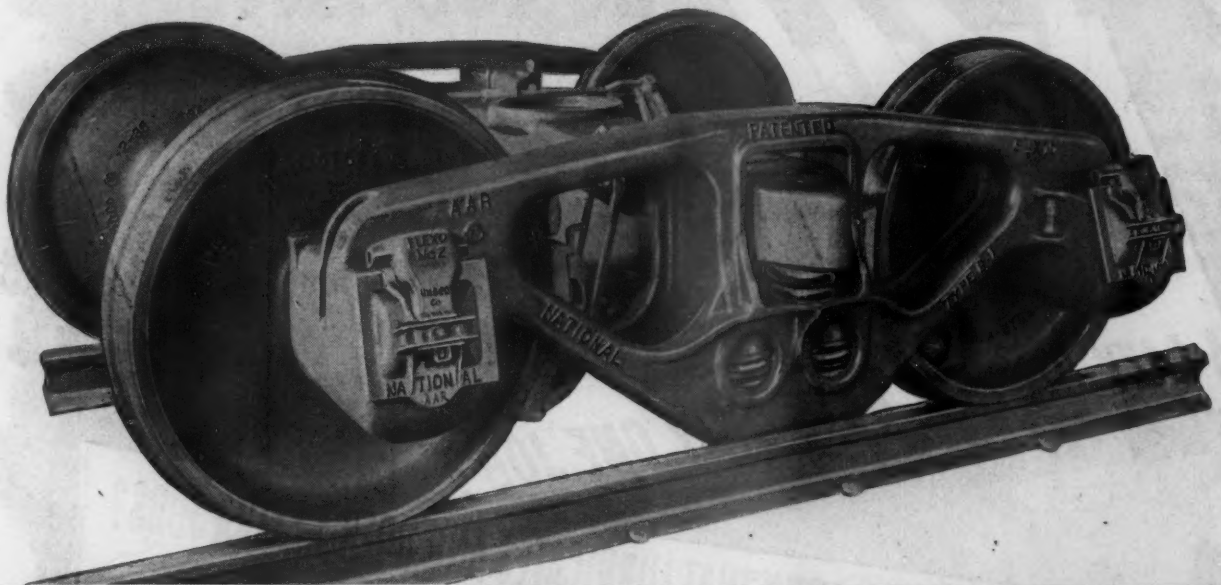
THE ALL-PURPOSE,
HEAVY-DUTY LUBRICANT
for trucks, buses, tractors, shovels,
stationary and marine Diesels,

SHELL TALPEX

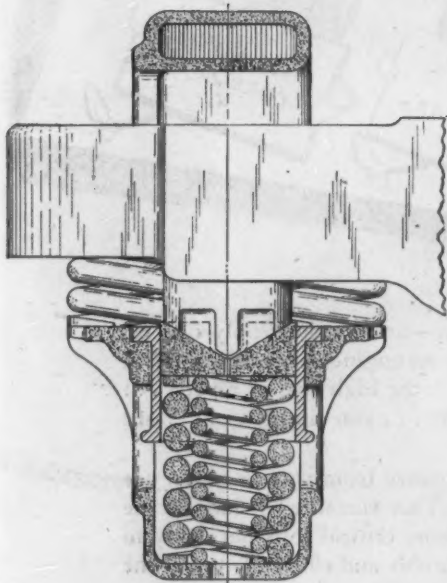
1. Has high detergency. Helps keep carbon, lacquer and foreign particles from adhering to pistons and rings, valves, ports.
2. Has exceptional Oxidation Stability. Holds to a minimum the formation of sludge, lacquer and other products of deterioration.
3. Has low Carbon-Forming Tendency. Reduces ring sticking and wear. Lengthens engine life.
4. Is non-corrosive to alloy bearings. Protects all lubricated engine parts against corrosion.

If the oil you now use is not doing all these jobs, it's lazy—should be changed to hard-working Talpex. Ask the Shell man to show you why.

National B-1 *With Dual Control*



The Truck for post-war fast freight service



Section Thru Control Unit
Two Control Units in each frame

Full protection of cars and lading, rails and road-bed, is essential for economical railroad operation.

A smooth riding car relieves the car and contents from damaging vibrations and shocks, reduces wear on track and car structure, and greatly lengthens the life of equipment.

The National B-1 Truck is equipped with four built-in friction units which control both vertical and horizontal oscillations. No separate snubbers are necessary.

The frictional snubbing action is governed by the load carried, thus assuring a smoother riding car whether light or loaded.

Specify National B-1 Trucks with Dual Control

NATIONAL MALLEABLE AND STEEL CASTINGS CO.

General Offices: CLEVELAND OHIO

Sales Offices: New York, Philadelphia, Chicago, St. Louis, San Francisco.

Works: Cleveland, Chicago, Indianapolis, Sharon, Pa., Melrose Park, Ill.

Canadian Representatives: Railway and Power Engineering Corporation, Ltd., Toronto and Montreal

Schaefer

EQUIPMENT

Helps to Keep

Cars on the Move



EVERY serviceable railroad car in America today is doing its part in the victory effort—traveling thousands of miles per month to speed the movement of freight.

Schaefer "light weight—full strength—plus" Brake Appliances are standard on most roads. Because of their rugged dependability, they are playing no small part in helping to keep rolling stock rolling, and in setting up ever-increasing mileage figures.



Write today for a copy of the new Schaefer Catalog.

Schaefer

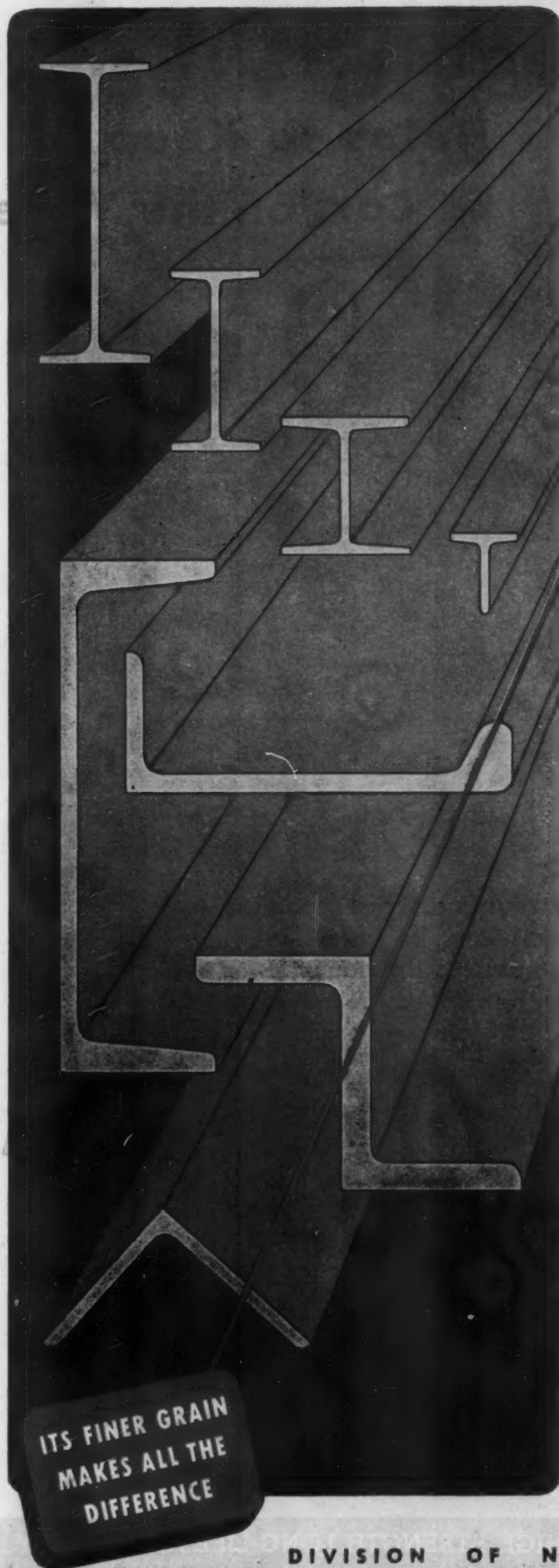
EQUIPMENT COMPANY

KOPPERS

BUILDING

• PITTSBURGH, PA.

DROP-FORGED FOR LIGHT WEIGHT. HIGH STRENGTH. LONG LIFE AND SAFETY



NOW . . .
STANDARD STRUCTURALS
AND SPECIAL SECTIONS
FROM WEIRTON
IN N-A-X
HIGH-TENSILE STEEL

Great strength combined with excellent weldability; high resistance to impact, fatigue and corrosion; freedom from air hardening and copper precipitation — these proven characteristics of N-A-X High-Tensile Steel are now available in structural shapes from Weirton.

N-A-X High-Tensile Steel is particularly advantageous where applications involve stress, strain and payloads. Our metallurgists will be glad to work with you in applying the advantages of this great steel.

WEIRTON  **STEEL CO.**

WEIRTON, WEST VIRGINIA

SALES OFFICES IN PRINCIPAL CITIES

DIVISION OF NATIONAL STEEL CORPORATION

A New Line of Forged Adjustable Rail Braces

PRESENTED BY

PETTIBONE MULLIKEN CORPORATION

... THE RESULT OF SUGGESTIONS FROM RAILROAD MAINTENANCE
OF WAY AND SIGNAL DEPARTMENTS

Maximum Bracing—Minimum Maintenance—Longer Service Life

PETTIBONE MULLIKEN design (1) Reduces the need for full rigid clamping. (2) Supplies constant bracing to the rail whether bolts are tight or loose or whether no bolts are used. (3) Controlled flexibility—not attempting to stop the wave or up-and-down mo-

tion of the rail, yet restricting tipping or side-thrust—no wide gage—close signal adjustments. (4) Provides larger, better fitting wearing areas of forged, corrosion resistant steel, thus reducing the frequency of adjustment. (5) Makes infrequent adjustment easy.



Two Bolt Brace

Bolts will be initially tighter and will stay tight longer than on other bolted braces. Maintains gage and is an effective brace to the rail even if bolts work loose. Square-head acorn nuts spaced for 180° turn with ordinary track wrench. 11 pieces—easy to install, adjust or remove.

One Bolt Brace

Bolt will be initially tighter than on other braces. Single bolt acts as a pivot under rocking motion caused by change of wheel weight from receiving to leaving edges of plate—tends to remain tight longer. Maintains gage and is an effective brace to rail even if bolt works loose. Square-head acorn nut permits 180° turn with ordinary track wrench. 8 pieces—easy to install, adjust or remove.

Boltless Brace

No bolts to corrode, wear or tighten. Controlled flexibility—up and down or wave motion of rail is not limited, yet restricts its tipping or side-thrust. Maintains gage, and permits accurate signal adjustments. Simplicity assures proper maintenance. Design permits single or double spiking on outside of stock rail if desired. 4 pieces—wedge, brace, key and plate.

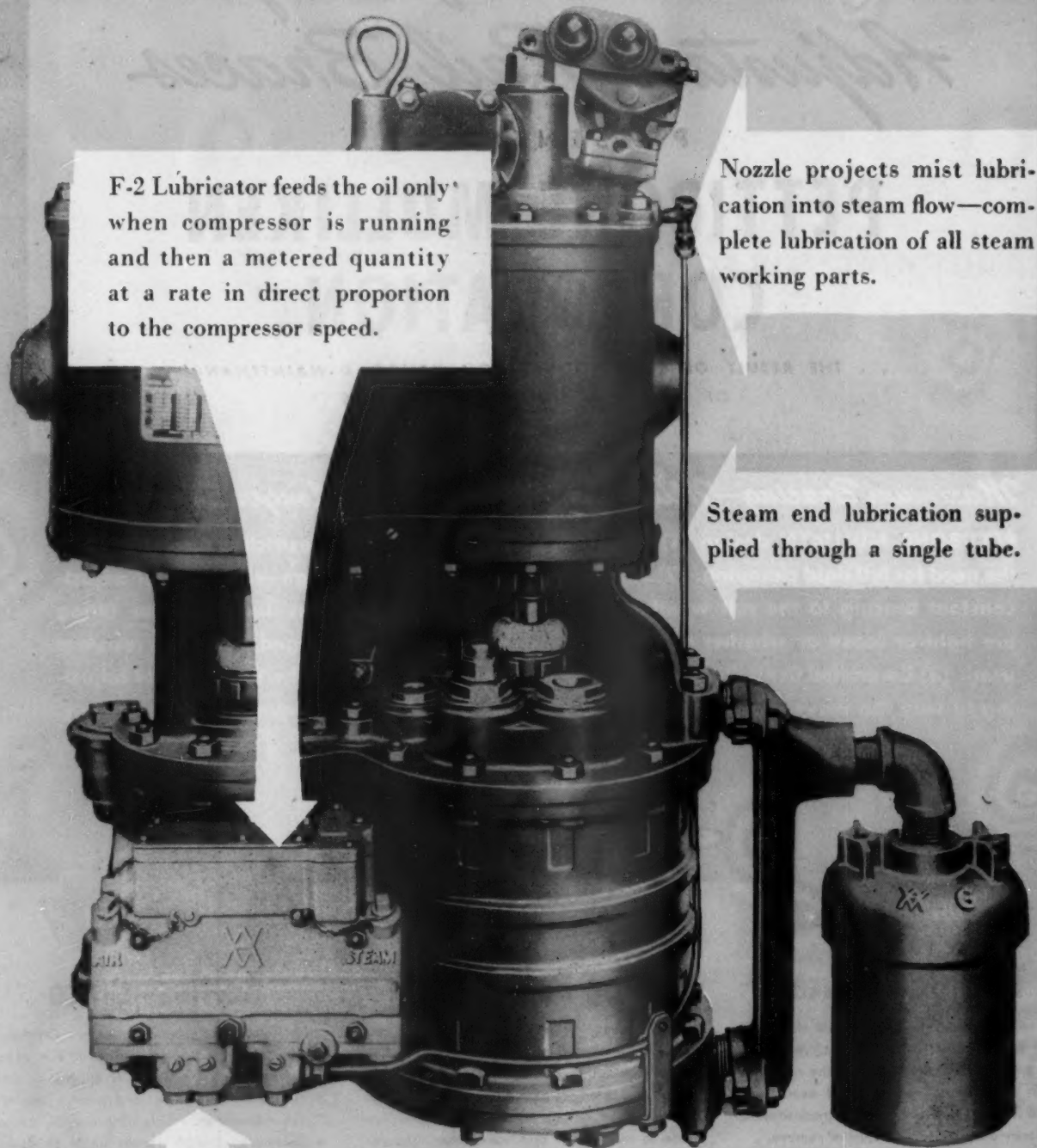
Write for Bulletin No. 1101

"Quality Since 1880"

PETTIBONE MULLIKEN CORPORATION

4710 West Division Street, Chicago 51, Illinois

Controlled Compressor Lubrication by "F-2" Lubricator



F-2 Lubricator feeds the oil only when compressor is running and then a metered quantity at a rate in direct proportion to the compressor speed.

Nozzle projects mist lubrication into steam flow—complete lubrication of all steam working parts.

Steam end lubrication supplied through a single tube.

F-2 Lubricator Mounted on Pads on the Air Cylinders. Air cylinders lubricated through feed ports in mounting pads.

Westinghouse Air Brake Company

Wilmerding, Pa.

Railway Age

With which are incorporated the Railway Review, the Railroad Gazette, and the Railway Age-Gazette. Name registered in U. S. Patent Office.

Vol. 119

August 11, 1945

No. 6

PUBLISHED EACH SATURDAY
BY THE SIMMONS-BOARDMAN
PUBLISHING CORPORATION, 1309
NOBLE STREET, PHILADELPHIA
23, PA., WITH EDITORIAL AND
EXECUTIVE OFFICES AT 30
CHURCH STREET, NEW YORK 7,
N. Y. AND 105 W. ADAMS STREET,
CHICAGO 3, ILL.

WASHINGTON 4, D. C.: 1001 NA-
TIONAL PRESS BUILDING, CLEVEL-
LAND 13: TERMINAL TOWER,
SEATTLE 1: 1033 HENRY BUILD-
ING, SAN FRANCISCO 4: 300
MONTGOMERY STREET, ROOMS
805-806, LOS ANGELES 14: 530
WEST 6th STREET, DALLAS 4: 4510
ROLAND AVENUE.

SAMUEL O. DUNN, CHAIRMAN.
HENRY LEE, PRESIDENT. ROY
V. WRIGHT, VICE-PRESIDENT AND
SECRETARY. F. H. THOMPSON.
F. C. KOCH, R. E. THAYER, H. A.
MORRISON, J. G. LYNE, H. E.
McCANDLESS, VICE-PRESIDENTS.
J. T. DeMOTT, TREASURER.

SAMUEL O. DUNN, EDITOR. ROY
V. WRIGHT, MANAGING EDITOR.
JAMES G. LYNE, ASST. TO EDITOR.
CHARLES LAYNG, WESTERN
EDITOR. C. B. PECK, ALFRED G.
OEHLER, E. L. WOODWARD, J. H.
DUNN, H. C. WILCOX, NEAL
D. HOWARD, GEORGE E. BOYD,
WALTER J. TAFT, M. H. DICK,
JOHN S. VREELAND, C. MILES
BURPEE, ARTHUR J. McGINNIS,
J. L. STOVER, C. B. TAYENNER,
H. E. MEASON, CHARLES ROBIN-
SON, GEORGE H. PARIS, LIBRAR-
IAN, EDITH C. STONE, EDITORIAL
ASSISTANT, BETTY KETCHUM.

RAILWAY AGE IS A MEMBER OF
ASSOCIATED BUSINESS PAPERS
(A. B. P.) AND AUDIT BUREAU OF
CIRCULATION (A. B. C.).

SUBSCRIPTIONS, INCLUDING 52
REGULAR WEEKLY ISSUES, AND
SPECIAL DAILY EDITIONS, PUB-
LISHED FROM TIME TO TIME
IN NEW YORK OR IN PLACES
OTHER THAN NEW YORK, PAY-
ABLE IN ADVANCE AND POSTAGE
FREE, UNITED STATES, U. S.
POSSESSIONS AND CANADA: 1
YEAR \$6.00; 2 YEARS, \$10.00;
FOREIGN COUNTRIES, NOT IN-
CLUDING DAILY EDITIONS: 1
YEAR, \$8.00; 2 YEARS, \$14.00.
SINGLE COPIES, 25 CENTS EACH.
H. E. McCANDLESS, CIRCULATION
MANAGER, 30 CHURCH STREET,
NEW YORK 7.

In This Issue

Page

The Burlington Tests Vista-Dome Car 245

Received well in formal test, the reconditioned stainless-steel chair car now has been placed in regular service on through trains to determine if more extensive adaptation is justified—This article tells about the job of reconstruction.

This Walkway Design Is Different 250

New multiple-span, single-track bridge of St. Louis-San Francisco, over one arm of Denison lake, employed scrap material for constructing walkways for trainmen—4,070-ft. length and 125-ft. maximum height of structure (located at a point where high winds prevail) necessitated this sturdy construction.

What Shippers Are Thinking About 252

Largely commendatory are the views of shippers who have written *Railway Age* about the article by Charles W. Braden in the Freight Progress Issue, challenging shippers to statesmen-like leadership in the formation of national transport policy—These, as well as some vigorous dissents, are recounted.

EDITORIALS

Progress Toward Socialism in Britain and Here	241
The "Vista-Dome" Experiment	242
T. V. A. and the Railroads	242
No Time to Give Up	244

GENERAL ARTICLES

The Burlington Tests Vista-Dome Car	245
1944 Railroad Construction Indices	249
This Walkway Design Is Different	250
What Shippers Are Thinking About	252

COMMUNICATIONS 254

RAILROADS-IN-WAR NEWS 256

GENERAL NEWS 261

REVENUES AND EXPENSES OF RAILWAYS . . 274

FREIGHT OPERATING STATISTICS 279

The Railway Age is indexed by the Industrial Arts Index and also by the Engineering Index Service



PRINTED IN U. S. A.

The Evolution of C.T.C. and "UNION" TIME CODE CONTROL

The first remotely controlled switches involved use of apparatus and circuits then commonly employed in power interlocking. While those system elements were and still are efficient in application to interlockings, they were usually uneconomic for operation of switches located appreciable distances from the desired point of control.

A great forward step was taken when signal engineers devised means to accomplish equivalent interlocking protection at the switches and signals in the field instead of at the control point. This made it possible to use wires between the control point and the field functions as communication circuits, i.e., they simply conveyed the desired signal and switch controls with final operation governed by the protective circuits in the field. The economic scope of *REMOTE CONTROL* was consequently greatly broadened.

It was then realized that a series of such remotely controlled locations could be controlled from one point and arranged to provide for train operation by signal indication. This led to the conception of Centralized Traffic Control; however, the relatively large number of wires required by such an arrangement restricted extensive use of the system.

When "Union" introduced coded systems of C.T.C., it became possible to control a relatively large number of functions from a single point over a few wires. Interlocking protection continued to be provided at the field functions as in remote control. The economic scope of *CENTRALIZED TRAFFIC CONTROL* was consequently greatly broadened.

The present two-wire code system is adaptable for use on wires carrying other services, as telegraph or telephone, or to permit other communication services to be superimposed on wires erected primarily for C.T.C.

A more recent "Union" development, Coded Carrier Control, makes C.T.C. operation almost independent of distance. Whole divisions may be controlled from a single point. In one installation already in service, 296 miles of territory are controlled from one office.

Our nearest district office will be glad to supply full information concerning "Union" Time Code Control Systems and their applications.

UNION SWITCH & SIGNAL CO.

SWISSVALE

PENNSYLVANIA

NEW YORK
CHICAGO



ST. LOUIS
SAN FRANCISCO

"Union" Time Code Control, serving only as a communication channel between the control point and the field functions, simply repeats the control lever positions for the desired switch and signal control; and carries to the control machine information as to position of switches and signals and location of trains.

FINAL OPERATION
OF VITAL FUNCTIONS IS GOVERNED
BY INTERLOCKED RELAY SAFETY
CIRCUITS IN THE FIELD

SHIR
terest
article
Freigh
merous
mouch
252 su
expres
port f
shippe
that t
thing
with
newer
recog
nation
and o
per as
nation
is bas
which
petual
ships

VIS
ticle
descr
car,
servi

WH
Whe
mean
ple o
decid
prin
Labor
press
feelin
with
what
of so
quest
there
(albe
have
ment
favor
gram
Brit
and
ment
which
be t
socia
ahea
quic
from
hemo

WE
of b
can
their
out
Brit
of l
indi
cour
say,
the
of th
lead
they
try
in a

The Week at a Glance

SHIPPERS' OPINION: The wide interest with which shippers received the article by Charles W. Braden in our Freight Progress Issue is reflected in numerous letters, frequently but not unanimously commendatory. An article on page 252 surveys the shipper opinion thus given expression, and so develops substantial support for Mr. Braden's thesis, which is that shippers are outgrowing the traditional idea that their immediate self-interest is the only thing that concerns them in their dealings with agencies of transportation. Their newer, broader attitude grows out of a recognition that the best interests of the nation as a whole, and so, increasingly and cumulatively, of the individual shipper as well, will be served by a far-sighted national policy toward transportation which is based on proved economic principles and which has as a major objective the perpetuation of existing open market relationships between carriers and shippers.

VISTA-DOME CAR: An illustrated article on page 245 gives a complete technical description of the Burlington's Vista-Dome car, now undergoing tests in main-line service.

WHAT DID THEY VOTE FOR?:

Whether the recent elections in Britain mean that the historically phlegmatic people of that harassed island actually have decided to put into practice the socialistic principles advocated by the victorious Labor party, or whether the none too impressive majority vote merely reflects a feeling that "it's time for a change"—without any very clear conclusion as to what that change may involve in the way of social and economic upheaval—those are questions that only time can answer. But there is no paucity of reasons for thinking (albeit wishfully) that the socialists may have won the responsibilities of government in Britain at a time peculiarly unfavorable for the effectuation of their program for nationalized industry. If the British (or world) economy collapses, and financial panic and mass unemployment come in the wake of that collapse—which is a development that very well can be the result of the earliest moves to put socialism into practice in the difficult days ahead—the British public may very quickly react by ousting the Labor party from the government with sufficient vehemence to be felt across the Atlantic.

WE NEED NOT WAIT: But leaders of business and of labor in this country can very clearly see, if they will, where their own duty and opportunity lie without waiting to learn whether or not the British—like virtually all of the continent of Europe—have decided to forsake the individual freedoms under which their country grew to greatness. These leaders say, almost unanimously, that they deplore the development of the totalitarian scheme of things. If they mean what they say, our leading editorial this week points out, if they have any real desire to see this country continue virtually alone in the world in affording its people, as in the past, al-

most complete freedom to use their skills and energies and resources as their own judgments dictate and their own capacities permit, and not as they are told to do by some government satrap, then it is high time for these leaders to begin to practice what they have been preaching.

TAKING IT TWO WAYS: In a letter published herein, the T. V. A.'s spokesman, W. L. Sturdevant, undertakes to indict us for "misrepresentation" in asserting that that government agency's operations are inimical to the welfare of the employees of the railroads because they deprive the railroads of business which they would enjoy if the economic scales were not thrown out of balance by the pressure of the tax collector's thumb in favor of the government agency. But what Mr. Sturdevant actually does show, as is developed editorially this week, is that T. V. A.'s competitive advantage is even greater than our earlier argument may have implied, and is an actual and potential menace to railroad employees' job security not only indirectly, in its role as a competitor, in the production of power, with coal mines that provide much traffic for the railroads, but also as a direct competitor with the railroads with its facilities for free navigation.

MODERN WALKWAYS: Something out of the ordinary in bridge walkways is described this week in the illustrated article on page 250, which deals with the Frisco's new structure near Denison, Tex., built in connection with a line change resulting from the creation of a flood-control reservoir. Sturdy and simple in design, and employing scrap material, particularly the light rail from which the supports and handrail posts are formed, these walkways along both sides of the 4,070-ft. bridge were developed to meet the requirements of a somewhat unusual situation.

LIGHTWEIGHT REEFER: A brief description appears in the news pages of an experimental lightweight refrigerator car which the I. C. is building to test out some of the ideas of the fruit and vegetable shippers. The use of collapsible bulkheads permits quick transformation into a box car.

NET GOES AHEAD: A substantial increase in the estimated net income of Class I roads for June, as compared with last year, has been reflected in the total for the first half of the year, which comes out a little ahead of the equivalent 1944 figure. But stormy weather is in the offing. The operating brotherhoods have submitted "demands" that will encourage the red ink manufacturers to expect big orders from the railroads, and the non-ops aren't likely to be long in following that lead. And recent events have encouraged more and more prognosticators to suggest an early date for the end of the war, which inevitably will change the complexion of railroad earning statistics, even if industry's shift over to peace-time pursuits goes ahead as rapidly as the most optimistic planners hope.

CUTTING IN ON COAL: What the increasing use of Diesel-powered locomotives means in terms of coal tonnage has been calculated by the I. C. C. statisticians, and is reported in this issue's news pages. If all the work these internal combustion-engined units do this year were done by coal-burning units instead, something in the neighborhood of 18 million more tons of coal would be consumed by the railroads, according to these calculations. The study mentions the fact, incidentally, without drawing any conclusions from it, that the sharp increase in the use of Diesel power on the railroads in the past five years has coincided, more or less, with relatively sharp increases in the price of locomotive coal.

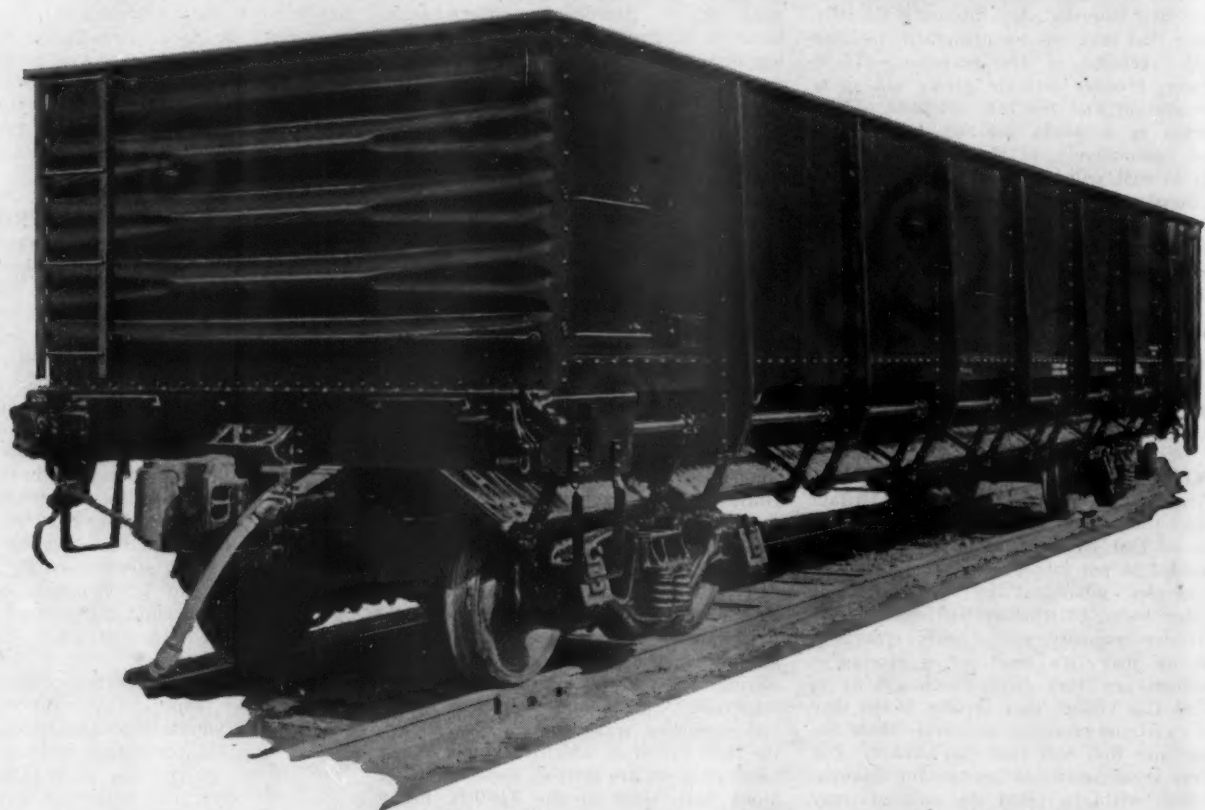
"REDEPLOYMENT" RECORD: Perhaps because there is nothing exceptional, in this war, about record-breaking performance by the railroads, there has been relatively little attention paid to their achievements in moving troops returned from overseas expeditiously and safely, and a relatively great hullabaloo raised over a few much-publicized instances where railroad service and accommodations allegedly fell somewhat short of perfection. Facts and figures appearing this week in the news pages give some indication of what the carriers have accomplished in the mass movement of soldiers these past few weeks, while some of the steps taken by several western roads to accommodate military personnel not traveling in organized groups are the subject of another story.

NAME ONE: Our sterling contemporary "Labor" has rapped President Virgil Jordan of the National Industrial Conference Board for his continuing insistence that the federal government cannot be given the responsibility of providing a job for everybody unless it is also given a parallel power to determine all wages and to tell everybody what to work at. "Labor" says it "dislikes regimentation, too" but adds: "There are some things worse than regimentation."

FOOD HANDLERS' SCHOOL: Nine eastern railroads are sending their dining car employees—cooks, waiters, dishwashers and stewards—to a school for food handlers, in cooperation with the federal government's Public Health Service. The idea, according to the account in our news section, is to give these employees a better understanding of the reasons why a high standard of sanitation must be maintained in their work, despite the difficulties of adhering rigidly to such practices under present conditions.

HOUSE DIVIDED: If anyone has an idea that everybody down South favors Governor Arnall's scheme to turn the courts into rate-making institutions, Senator Johnston's remarks, summarized in the news pages, may bring a different light on the matter. The "correct route of travel," the speaker pointed out—and his remarks did not go without support—is through the Interstate Commerce Commission.

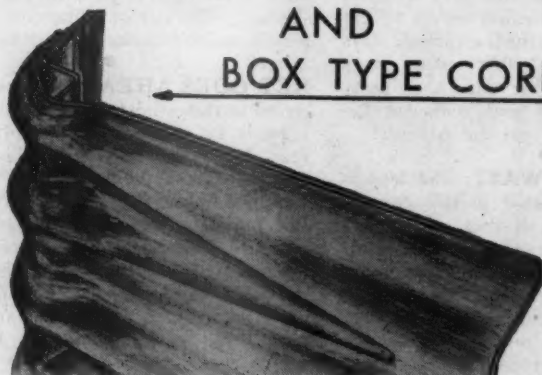
An Improved
DREADNAUGHT END
FOR RIGID END GONDOLAS



**25% STRONGER THAN THE
 CONVENTIONAL DREADNAUGHT**

IT HAS
ROUND CORNERS →

← AND
 BOX TYPE CORNER POST



STANDARD RAILWAY EQUIPMENT MFG. COMPANY

HAMMOND, INDIANA

WORKS: HAMMOND, INDIANA

NEW KENSINGTON, PA.

CHICAGO OFFICE—310 S. MICHIGAN AVE.

RAILWAY AGE

Progress Toward Socialism in Britain and Here

The result of the recent election in Great Britain has been received with acclaim in this country by the promoters of national socialism and with dismay by the proponents of private enterprise. The Labor party won on a platform advocating socialism—i. e., government acquisition and operation of the Bank of England, railroads and all other means of domestic transport, the coal mines, the iron and steel mills and other heavy industries, the power industry and ultimately of the land. But the victory for socialism was not as overwhelming and conclusive as is usually represented. About 12 million voted for the Labor party's candidates for Parliament; but 9 million voted for the Conservative candidates and 2 million for the Liberal candidates.

How the new Labor government will proceed to carry out its program is an interesting matter of conjecture. With the government debt already enormous, and prospects of recovering the foreign trade upon which Great Britain has been so largely dependent almost the worst possible, the economic conditions under which attempt will be made to carry out the program of socialization are most unfavorable. Will the government try to buy at fair prices all the property it proposes to take over? If so, enormous additions will be made to its already enormous debt, and to the interest on it. Or will the government try virtually or actually to confiscate all this property? In the former case, will those who voted for socialism willingly bear their share of the resulting increase in interest on the government debt, while seeing it paid out to the former owners of the property acquired? And if the government adopts a policy of virtual or actual confiscation rather than of purchase, will the 11 millions, or almost 48 per cent of the electorate, who voted against socialism, and especially the millions who, as security-holders and otherwise, own the property it is proposed to take, submit *peacefully* to its confiscation?

Putting Theory into Practice May Be Difficult

The real test of whether the British actually want socialism adopted will come when the Labor government begins trying to acquire all the vast amount of property that it intends to take over. The domestic and world conditions with which it will be confronted will be so unfavorable, anyway, that it will be surprising if the first moves of the government toward adopting socialism do not cause an almost complete post-war economic collapse and unprecedented unemployment.

In that event, the Labor government, under the British political system, could and might be quickly driven from power. The British, whether they understood what they were doing or not, have by a small majority *voted* for socialism. But they have not *adopted* it yet.

Meantime, those business men and many others in the United States who profess opposition to socialistic policies much better than they practice it may well study British experience. All of America's free institutions—legal, political, social, and economic—are outgrowths of successful transplantation from British stock. Francis Bacon, John Locke and Adam Smith created the philosophy on which the political and economic freedom established by our Constitution was based; and ever since then Americans have derived their convictions regarding true political and economic liberalism as much from such Englishmen as John Stuart Mill and Alfred Marshall as from Thomas Jefferson and other American protagonists of free institutions.

Business Leaders Untrue to Traditions

Britain has voted to abandon such institutions largely because many leaders of her free economy and polity have been recreant to the heritage entrusted to them. During the economic troubles which followed the first world war, the easy way to keep complainants quiet was by succoring them at taxpayers' expense—and almost the whole people got into the habit of going to the government for relief and aid, instead of following the harder and healthier course of caring for themselves. In the 'Twenties, British industry went in for tariff protection and in recent times has sought, or at least accepted, government co-operation in the furtherance of monopolistic cartels. Also in the 'Twenties, the British government clipped the gold content of the pound sterling, emulating the medieval tyrants.

Seeing a private enterprise so inclined to lean on government, so unlettered in the principles which gave validity to its regime, and so willing to compromise these principles for a little temporary "security," it is not surprising that the average Briton lost confidence and hope that his traditional economic and political institutions would improve his lot. When a social and economic system begins seriously to falter, those seeking to oust it do not have to prove that they can do a better job, but only to convince people that any change would be an improvement.

But no accusing finger can be pointed at our British brethren for their failure to keep their institutions

strong and free which cannot be leveled with equal reason at leaders in economic and political life on this side of the Atlantic. Many of our business men dilute their free enterprise principles to whatever degree so required to enable them to accept political favors in the form of tariffs and "public works." Some of the most highly publicized of them lionize and fraternize with obvious political and economic totalitarians for the newspaper pictures and the crumbs of government hand-outs thereby to be won. Our labor leaders go their merry way demanding wage increases calculated to ruin private enterprise, believing, doubtless, that when the time comes to pay the piper, they will be beyond the reach of secular griefs.

England can at least boast of a Churchill—a man who, even in defeat, towers in intellectual and moral stature above all other political and industrial leaders of his time. Churchill said not long ago: "In life the only wise course is to follow the course of duty and not of interest. Every man knows what his duty is. But it is not given to many to know their true interest."

If only a little of the Churchill integrity and courage will animate leaders in this country, we can still escape what Britain is threatened with; but if we are to escape it, those in this country who profess allegiance to free enterprise will have to begin soon to practice as well as preach it.

The "Vista-Dome" Experiment

The "Vista-Dome" car, constructed by building a glass-enclosed dome in the roof of a stainless-steel coach at the Aurora, Ill., shops of the Chicago, Burlington & Quincy, as described elsewhere in this issue, is admittedly an experiment suggested by General Motors "Astra-Liner" designs for passenger cars of the future. The idea of the observation dome, itself, is definitely on trial from the point of view of desirability and feasibility. The need for a depressed center sill and underframe to give added headroom under the dome compartment is yet to be demonstrated, since the Burlington car presents an ingenious seating arrangement to utilize this space on a straight-underframe car. The size of the dome, in the case of depressed-center cars at least, will apparently be limited by how much space can be spared from that now occupied by air-conditioning machinery, batteries, tanks and other underneath equipment. Preferable dome height above roof level, necessary added power requirements for lighting and air conditioning, and many other details are yet to be determined. Still another somewhat "touchy" question is whether or not to assign seats in this preferred observation space at a small extra charge.

The Burlington's Vista-Dome car represents a forward-looking and courageous attempt to answer some of these questions and, incidentally, further convince the general public that railroads are leaders in plans for ultra-modern land transport equipment during the post-war period. The Burlington car has been carefully designed to meet all strength requirements, stresses formerly carried in the roof being transmitted through the 24-seat dome section by reinforcement elsewhere in the structure. Many problems were encoun-

tered in adapting the dome construction to an existing car, but these were solved and an exceptionally workmanlike job was done in building the dome, inserting the reinforcement and applying stainless-steel sheathing to the streamline exterior so the car not only looks like new but is actually stronger than when new.

No small amount of time and effort was devoted to interior equipment and decorative effects, also. Seats are comfortable, individual, reclining-back type, upholstered in attractive materials which harmonize in color with the carpets, window drapes and interior color scheme of walls and ceilings. An exceptional amount of luggage and coat-hanger storage space is furnished. Lights are both artistic and effective. While primary interest centers about the dome compartment, the men's and women's lounges also are highly appealing and well adapted to please the traveling public from the point of view of utilitarian as well as artistic modern features.

The Vista-Dome car made its first formal trial run on the Burlington line from Chicago to St. Paul, Minn., on July 23 and has since accumulated about 7,600 miles of service on fast trans-continental trains in both scenic and plains country. The public reaction has been favorable in almost every particular. Even discounting somewhat the natural enthusiasm for a spectacular new feature in car design, an analysis of comments from 260 individual passengers indicates that the unusual quietness, ease of riding, temperature comfort, and especially the visibility in all directions, including upward, in the dome compartment are highly pleasing to the traveling public, most of whom have never had a real look at the railroad right-of-way as it approaches, or scenic effects from train-roof level.

Further experience in the operation of this car will be watched with interest by the Burlington and other railroads to see if the dome feature is sufficiently popular and practicable to warrant more extensive adaptation and use.

T. V. A. and the Railroads

The director of information of the Tennessee Valley Authority, W. L. Sturdevant, in a letter published on another page herein, accuses this paper of "basic misrepresentation" in an editorial in our May 12 issue in which we showed how the T. V. A. does not pay taxes and interest on the same basis that would be required of a comparable enterprise in private ownership.

Mr. Sturdevant's letter does not, as intended, weaken the argument of our editorial, but considerably strengthens it. Our contention was and is that T. V. A. is so financed and taxed as to permit it to sell its services at less than their true economic cost and thus to undermine competing private enterprise. We showed that the "taxes" and "interest" charged in 1944 by T. V. A. on its investment of \$764,000,000 of public money fell about \$21,000,000 short of similar charges which a private concern of equivalent investment and gross revenues would have to pay—and that, consequently, T. V. A. was able to offer lower rates for its power than would be possible for a company in private ownership.

By uneconomically low charges for its hydro-electric power, made possible by the hocus-pocus of its political bookkeeping, we showed how T. V. A. attracts patrons away from coal-produced power, to the detriment of the railroads and their employees, to whom the transportation of coal is a principal source of employment.

The main point made by Mr. Sturdevant and by which he seeks to convict us of "basic misrepresentation" is his contention that T. V. A.'s investment for power purposes is only \$359,000,000—or less than half the figure of \$764,000,000 which we used as T. V. A.'s investment. The difference between our figure and his, he says, represents "capital costs and the net expenses of non-income-producing activities, such as navigation, flood control, development of new and improved fertilizers, agricultural and industrial development activities, forestry and reforestation and research." These "non-income-producing activities," he says, are "governmental functions" and ought not to be charged against the electric rate-payer.

Just when did most of the "non-income-producing activities" Mr. Sturdevant mentions become "governmental functions"? However, he is correct in the latter part of this contention, i. e., that the electric rate-payer ought not be charged for these things, if, as a matter of fact, so small a part as he says of T. V. A.'s investment is properly chargeable to electric power. But T. V. A.'s allocation of its capital charges among its various functions is open to question. In a speech reported in the Congressional Record for August 10, 1944, Representative Whittington said:

"The reservoirs along the Tennessee river in the flood of 1937 . . . contributed to the reduction of flood heights at Cairo substantially 1 or 1½ inches. Other dams have been constructed since. They will further reduce flood heights at Cairo by something more than 2½ inches. . . . It is a fallacy to say that T. V. A. has provided for the control of floods in the valley of the Tennessee river. Its objective was hydro-electric power. . . ."

A multi-purpose enterprise such as T. V. A.—with some of its functions supposed to pay their way and others not—will always labor under the temptation to shift as large a share as possible of its joint costs to its non-income-producing functions, thereby making a favorable showing for the product that it has to sell in a competitive market. We submit that there are *prima facie* grounds for suspecting that T. V. A. has practiced this legerdemain very liberally indeed—when so predominantly an electrical power enterprise as it obviously is seeks to ascribe more than half of its capital costs to its subordinate functions.

However, for the sake of the argument, let's take Mr. Sturdevant's figure of \$359,000,000 for T. V. A.'s investment in power and ascribe the remaining \$405,-

Sole Survivors in Leadership for Freedom



000,000 of its investment to navigation, the fertilizer business, agricultural and industrial development and so on. None of these other functions except navigation could account for capital outlays running into the hundreds of millions (the flood control effect quite evidently being incidental to the hydro-electric development). What Mr. Sturdevant insists, therefore, in substance, is: Do not charge T. V. A. power with an investment of \$764 million. Instead, charge \$359 million to power and \$405 million to navigation and other services.

On his basis, then, T. V. A. is offering to shippers *absolutely free of charge* a navigation facility which has cost some \$400,000,000 and which yields no *ad valorem* or income taxes; and it is thereby artificially and uneconomically diverting traffic from railroad transportation, the cost of which, including taxes, has to be paid for in full by charges levied on the users of railway service.

Mr. Sturdevant may take his choice—either (1) T. V. A. is competing uneconomically against the railroads and their employees, as we suggested, by selling its electricity at a price below its true cost; or, (2) on the basis he prefers it is spending a great deal more to provide transportation at less than cost in competition with the railroads than we supposed or contended. Either way you take it, T. V. A. remains a colossal socialist venture which is peddling transportation and/or a substitute for transportation (i. e., hydro-electric power) with charges to users which reflect only a part of the costs which private enterprise engaged in the same business has to charge—and it is, thus, undermining self-sustaining and taxpaying private enterprise and the jobs of employees in such enterprise.

The purpose of the editorial which Mr. Sturdevant criticized was to show that a railroad-employee who

supported T. V. A. would be working contrary to his own interest—and Mr. Sturdevant establishes that point even more firmly than we did by insisting that a larger share of T. V. A.'s investment should be charged to navigation than we had suggested. Hydro-electric power competes with the railroads indirectly, while T. V. A.'s waterways compete with them directly. T. V. A. does charge something for its power, but its transportation service it gives away absolutely free. If T. V. A.'s indirect competition with the railways and their employees through its hydro-electric power is less severe than we contended, then its more direct competition with them is to exactly the same degree more unfair and severe than we indicated.

T. V. A.'s present large use of coal, of which much is made by Mr. Sturdevant, is entirely a "war baby" and will rapidly vanish when the war ends—i. e., at exactly the time when the coal industry and the railroads will need this business and when miners and railroad employees will need jobs. T. V. A. uses the mines, the railroads and their employees merely as a "stand-by" convenience, demanding their services when they don't need the business and jobs and forsaking them when their business is bad and jobs are harder to get.

No Time to Give Up

In a message to the committees of the American Railway Engineering Association, A. A. Miller, president, offers a number of suggestions for conducting their work under the difficult travel conditions now prevailing.

These suggestions are so much to the point that they could well be used as a guide by other groups and organizations of railroad men for whom, as Mr. Miller points out, "there is in the last analysis no real substitute for discussions across the table . . .," even though "there is no denying that it is possible to make progress with fewer meetings by greater reliance on correspondence, circular letters and letter ballots. . . ."

Expressing the conviction "that the committee should not give up entirely the possibility of some means of oral discussion, even if they might find it necessary to cancel plans for meetings of the full committee," Mr. Miller goes on to make his suggestions for putting this thought into practice. One expedient, he says, would be to call a meeting of the committee regardless of the outlook for attendance, on the ground that the presence of no more than a half dozen members is much better than no meeting at all. Another suggestion is the holding of conferences of local groups, including members of the parent committee or of some sub-committee; while still another is to hold a skeleton meeting of the committee, including one representative of each of the sub-committees.

Ever since the war started the A. R. E. A. and similar organizations of railroad men have had to conduct their affairs under severe difficulties. Because of the inability to hold regular meetings and the pre-occupation of railroad men with the enlarged duties and responsibilities that have been their lot during the war,

there has been some loss of interest among the membership, with the result that in some instances it is only through the untiring efforts and unflagging interest of a relatively few members that the organizations have been kept alive and functioning. This has been especially true of some of the smaller groups that have not had the benefit of an adequate headquarters staff capable of handling routine matters.

These organizations have rendered valuable service in helping railroads to solve their war-time problems. With a war yet to be won it will behoove many of their members, chiefly those who are serving on committees with important work to do, to make a candid appraisal of their personal contributions in this respect, especially regarding whether they have allowed themselves to be drawn into the it-isn't-any-use school as a result of the recent developments intensifying the difficulties of travel. In any event, the suggestions made by the president of the A. R. E. A. for continuing committee activities under these difficulties are worthy of careful consideration.

The Full Employment Bill

"Seldom, if ever, has a legislative proposal so sweeping in character and so inadequately supported by business experience as the pending Full Employment Act of 1945 gained such strong adherence in influential quarters in so short a time and with so little public discussion. This measure, if enacted into law, would drastically alter the relation between government and business in the United States. It would place upon the federal government the explicit and continuing responsibility for the aggregate volume of employment and unemployment. It seems clear that a proposal of this kind should not be adopted without far more careful public consideration of its underlying nature and its possible consequences than has yet been given them. . . ."

"The main belief underlying the proposal—that the system of free enterprise, instead of tending to provide full employment, tends rather to produce a continuing gap between production on the one hand and the investment and expenditure required to absorb it on the other—is contrary to long-accepted economic teaching and certainly has not been clearly demonstrated by experience. . . . The experience of recent years certainly does not support the theory that budgetary deficits have an inherent tendency to promote prosperity and budgetary surpluses a tendency to create depressions. During the nineteen-twenties, when the federal budget showed a consistent surplus and the public debt was reduced at an average rate of approximately a billion dollars a year, business in the United States enjoyed a period of unprecedented prosperity. In the nineteen-thirties the experience was reversed; an uninterrupted series of annual Treasury deficits was accompanied by persistent depressions. . . ."

"Perhaps the most dangerous feature of the proposal is its assumption of the government's responsibility to guarantee employment. Jobs are given by private employers, and the number of jobs available at any time depends on a large and complex set of conditions over which no one in a free society has control. As soon as, and to the extent that, such control is undertaken, the society ceases to be free. A government of limited powers is not in a favorable position to guarantee employment. . . . The conclusion seems inescapable that full employment cannot be guaranteed in a free society. Nothing short of a complete dictatorship would be in a position to undertake that responsibility. . . ."

—From the Guaranty Trust Company (N. Y.) "Survey"

The Burlington Tests Vista-Dome Car

Reconditioned stainless-steel chair car with glass-enclosed dome built into the roof structure shows favorable results in test runs and regular service

WHAT is believed to be the first American railway passenger car with a steel and glass-enclosed observation compartment extending upward through the roof is the Vista-Dome stainless-steel chair car of the Chicago, Burlington & Quincy, which attracted much favorable attention in a formal test run, as mentioned in the *Railway Age* of July 28, and was subsequently placed in regular service on through trains to discover if this unique construction is sufficiently popular to justify more extensive adaptation and use. The dome-type construction was originally suggested by the General Motors "Astraliner" designs described in the August 4 *Railway Age*.

The work of constructing the Vista-Dome car was unusually difficult because it necessitated building the glass-enclosed observation dome into an existing car and using only such materials as were readily available without drawing on critical war materials. Whereas, the General Motors designs called for a depressed center section, the Burlington car was rebuilt without change in the underframe and main floor, seats in both the dome compartment and the main body of the car under the dome being arranged so as to take advantage of the decreased headroom required when sitting as compared with standing. The

reconstruction work was done at the Burlington's Aurora (Ill.) car shop.

Features of the Dome-Car Design

The car from which the Vista-Dome was constructed was a 79-ft. 8-in. streamline stainless-steel chair car, built in 1940 by the Edward G. Budd Manufacturing Company, Philadelphia, Pa. It provided 52 seats for passengers, not including seats in the women's lounge and the men's smoking room and, as redesigned, the seating capacity is 58. The height of the original car from rail top to roof was 13 ft. 6 in.; the height with the dome added is 16 ft. 2 in. Some older passenger cars are as high as 14 ft. 8 in. and the Burlington operates freight cars that extend 17 ft. 3 in. above the rail top. Clearances are ample for the Vista-Dome car to be operated practically anywhere on the Burlington system.

The glass-enclosed dome compartment, which contains 24 de luxe seats, is approximately 22 ft. 6 in. long and 10 ft. wide. The dome extends 2 ft. 8 in. above the former roof, which places passengers' heads and shoulders well above

the roof line, giving them a good view in every direction, including forward and back over the top of the train. (Seats are reversible to suit the direction of movement of the car.) The distance from floor to ceiling of the dome compartment is 6 ft. 2 in. The car weighs 130,000 lb. compared with 110,000 lb. before the dome was added and compared with 165,000 lb. for a conventional car. Had the Vista-Dome car been built new, it would not have weighed much more than 110,000 lb.

Trucks used under the rebuilt car are the original trucks, equipped with Timken roller bearings, lateral and vertical snubbers, and stabilizers to resist car sway. While the car was notably easy riding in early tests, it is expected that other improved trucks will be tried under it in an effort to determine which design functions most effectively in cushioning road shocks.

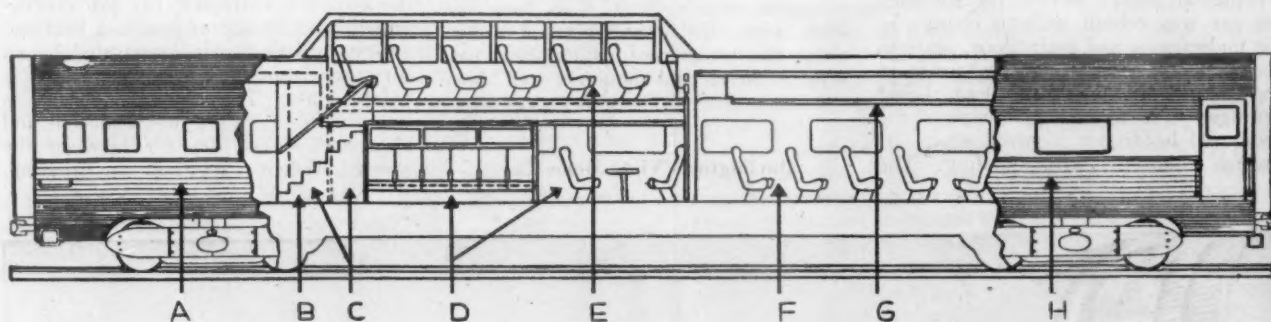
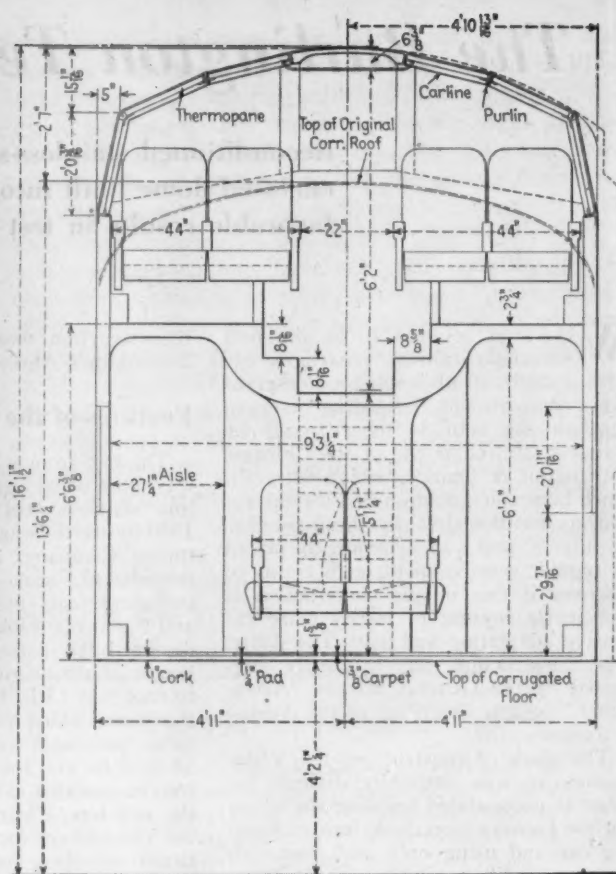
Owing to the unavailability of curved glass or suitable transparent plastics in war-time, the windows and roof of the dome are constructed of flat double-pane glass. The outer pane is a heat and sunray resisting glass, separated by an air-space from the inner pane which is safety glass. The air-space serves as an insulation against heat and cold and the provision of dry air between the panes prevents fogging or frosting,

Burlington's Vista-Dome Car





ABOVE—The Seating Arrangement Under the Dome Compartment—AT RIGHT—Section Through the Vista-Dome



How the Dome Is Placed in the Car

A—Women's Lounge
B—Enclosed Stairway
C—Coat Rack and Luggage Compartments
D—Twelve Longitudinal Seats and Four-Seat Card Section

E—Vista Dome Seating 24
F—Main Passenger Compartment Seating 18
G—Overhead Luggage Rack as in Original Car
H—Men's Lounge

which would impair the view from the dome.

The dome section, as well as the balance of the car, is air-conditioned to insure comfortable temperature and ample ventilation in summer or winter. Illumination is so arranged that, at night, all lights in the dome except those illuminating the floor can be extinguished. This permits passengers to see the right-of-way ahead illuminated by the locomotive's headlight and, on many nights, the entire countryside bathed in moonlight.

For the present at least, the Burlington contemplates that no extra fare will be charged for riding in the dome, although passenger traffic officers antici-

pate that the popularity of this scenic vantage point may create a problem.

Coincident with the installation of the dome compartment, the main floor of the car has been remodeled and refinished. The main passenger compartment contains 18 reclining chair seats in conventional arrangement. Beneath the dome space are 16 seats. Four of these may be used to form a card-playing section and 12 are placed back-to-back along the center of the car, facing outward toward the windows. The two rows are separated by a glass partition. A short stairway, so designed that passengers instinctively grasp double handrails, leads up to the dome compartment.

A large, daintily appointed women's

lounge and a spacious men's room are located at opposite ends of the car.

Method of Construction

In rebuilding and reconditioning this car at the Aurora shops, both design and construction details were dictated in many instances by the fact that the car was not a new design. For example, the limited headroom available with a straight rather than a depressed-center construction placed definite limitations on how space under the dome compartment could be used. In view of the urgent need for employing only such materials as were, for the most part, already on hand at Aurora shops, many substi-

tute materials and, by the same token, fabricating methods, were utilized. Stainless-steel sheets and pressings, joined by the Budd Shotweld process, were used when available in the desired thicknesses, but it was necessary to use arc-welded carbon-steel structural shapes for the dome frame and aluminum sheets for some of the wainscoting and ceiling below the dome. Exterior roof and side sheathing is entirely stainless steel.

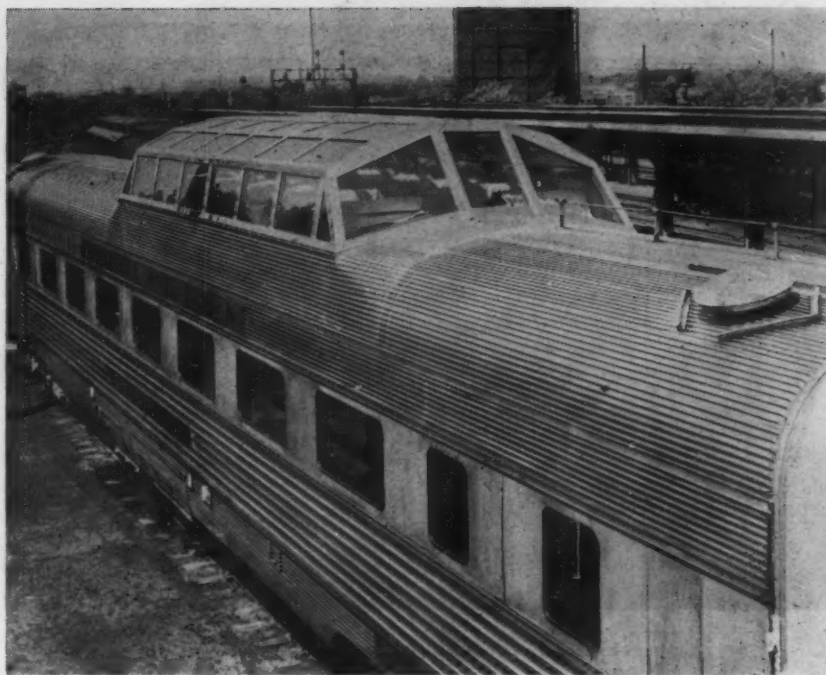
The dome carlines consist of T-sections extending in one piece from side plate to side plate and the purlins are short T-sections of the same size welded between the carlines. These T-sections were made by cutting an I-beam of the proper size along the web center-line with a cutting torch.

Longitudinal forces in the rebuilt car are carried through the dome section by means of reinforcing plates and shapes inserted in the car sides just above the windows. This reinforcement extends well ahead and back of the dome itself in order to assure a strong, rigid and permanently straight construction. The floor of the dome performs many of the functions of the roof such as tying upper portions of the sides together, and resisting torsion and latitudinal bending. Structural partitions transmit such forces from the roof to the dome floor. Longitudinal beams in the dome floor are supported by structural partitions at the ends and middle of the dome region. Even the staircase which gives entrance to the dome is designed so that some of the step treads and risers, as well as the staircase sides, perform structural functions.

The dome compartment is thoroughly insulated with J. M. rock cork board insulation. Glass used in the dome consists of Libby-Owens-Ford Metl-Flex Thermopane, the front, back and top of the dome comprising double laminated panes of $\frac{3}{8}$ -in. safety glass separated by a $\frac{1}{4}$ -in. air-space, the outer pane having heat- and sunray-resisting properties. Side windows in the dome have one pane of $\frac{1}{4}$ -in. heat-absorbing glass, then a $\frac{1}{4}$ -in. air space and a $\frac{3}{8}$ -in. pane of safety glass on the inside. All glass is sealed in steel frames. The steel dome frame is covered on the outside with stainless steel and on the inside with a thin layer of wood, both for insulation and for the sake of appearance. In fact, the dome interior utilizes wood finish except for the center ceiling duct.

Air-Conditioning and Lighting

No change was made in the method of heating and air conditioning the front and back sections of the car. The original G. E. 20-kw. belt-driven axle generator and Exide 1,000-amp. hr. battery were retained, as was also the original Trane $7\frac{1}{2}$ -ton air-conditioning unit with motor-driven four-cylinder compressor and Trane evaporative condenser unit. The center ceiling duct in the original car was cut out at the dome section and replaced by an air-duct passing vertically upward through glass walls in the center window at the front of the



The Dome Seen at Roof Level

dome and thence into the center ceiling duct, equipped with Aerofuse circular outlets for the cool air. Side ducts and outlets just below the window level also distribute cool air in the dome compartment. The return air duct in the dome front wall just above the floor simply transmits air to the lower car floor from which it circulates back through the car and into the overhead return duct in the usual manner.

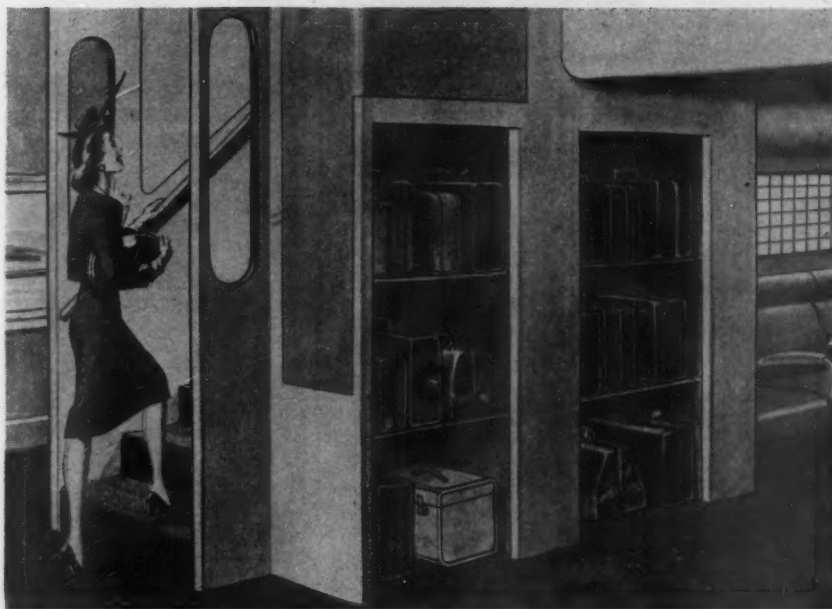
For air conditioning underneath the dome compartment, outlets are included

in the rounded ceiling panels. Positive circulation of cool air to this and all other parts of the car, especially the dome compartment, are assured by supplementing the original $\frac{3}{4}$ -hp. electric-driven blower with another motor of the same size, directly connected to three blower fans, one in the ceiling and one in each side duct leading to the dome.

In spite of the increased air-conditioning load as a result of installing a glass-enclosed dome in the roof of this car, temperatures in the dome compart-



Looking Forward in the Dome Showing Window and Air-Duct Construction



Luggage Space Is Provided at the Sides of the Stairway

ment during the test run were kept down to 78 deg. F. with a maximum outside temperature of 103 deg. F. To achieve this effect, however, required practically continuous operation of the Freon compressor unit while handling the peak cooling load.

Car heating equipment also was little changed by addition of the dome to this car. When necessary, hot air is delivered to the dome compartment through the center ceiling and side air ducts. This heat is supplemented in the usual manner by floor heat from Vapor fin-type radiation units located along the floor on each side of the dome and controlled by two Vapor thermostatically operated heat valves.

Attractive and effective electric-light fixtures have been installed throughout the rebuilt car. In the dome compartment are six Luminator six-light fixtures on each side of the center ceiling air duct, making a total of 72 15-watt lamps, or 1,080 watts. Aisle lamps, installed under the seats, consist of five staggered fixtures with a six-watt lamp in each. Fourteen six-watt stairway light fixtures are also used, one on each side of every step.

The under-dome compartment has four Luminator aisle-light fixtures. There are also 12 magnifying-lens 25-watt reading lamps, supplied by the same manufacturer and installed one over each of the longitudinal seats. This same type of light is also installed over each cross seat in the card-table section. Center ceiling and baggage-rack lights are unchanged in the main passenger compartment, but important improvements have been made in the men's and women's rooms where ceiling lights have been removed and built into the curved edge of a box-like construction at the top of each wall. These lights are 25-watt and covered with attractive, curved plastic shields.

The increase in lighting load from 1,550 watts in the original car to 2,664 watts in the rebuilt car necessitated installing one additional lamp regulator and 11 more light switches.

Decorative Treatment

In the original coach, the chairs were upholstered in Collins & Aikman warm gray mohair. In the rebuilt car, seats and carpets for floors, including the hallways, are a peach color, window drapes in the main passenger section being blue. The lower walls under the dome compartment are a red tile and the upper walls pale yellow paint on metal inside finish. Longitudinal seats under

the dome facing the windows are upholstered in the same material and were constructed at Aurora shops. Above the center seats are glass panels which serve the double purpose of promoting seat privacy and desirable decorative effect. The dome compartment is finished in grey and green with a maroon carpet. The stair carpet to the top step is peach. The stairway below the hand rail is stainless steel; the upper walls of the stairway are finished in a surf green.

Special attention was given to the men's and women's lounges, the latter being finished in a turquoise green for the built-in settee and salmon for one chair and the dressing table, the same color being incorporated in the drapes. The floor covering is a light brown Armstrong linoleum. Walls are beige cream and ceiling is the same color. White vitreous enamel lavatory and dental fountain are enclosed with stainless steel. This boxed-in construction is used to conceal the pipes and provide covered space for used towels. Dispensaries and other receptacles are included in the upper box construction which carries the light fixtures. The women's lounge is generously supplied with well-lighted mirrors.

The men's lounge is done in antique tan leather for the settees and the floor is a blue-green Marbelle linoleum. The upper walls are beige and the lower walls a cinnamon brown. The same boxed-in construction of lavatory fittings is used as in the case of the women's lounge. Light fixtures built into the box construction at the upper side walls utilize the rounded translucent plastic shield to give an attractive modernistic effect. All trim in this room and throughout the car is stainless steel. Suitable prints, mounted in stainless-steel frames, are used for decorative purposes in both of the lounges.



Photo from European Picture Service
Post-war Motive Power in France on Public Exhibition—A New 2-8-2 Type Locomotive for High-Speed Service, Rated at 3,400 Hp.

1944 Railroad Construction Indices

WASHINGTON, D. C.

THE Engineering Section of the Interstate Commerce Commission's Bureau of Valuation has issued its Railroad Construction Indices for 1944, showing that last year's overall index for the country as a whole was 201, up one point from 1943's 200 (revised) and 13 points from 1942's 188. The indices are weighted averages based on the 1910-1914 costs as 100.

The 1944 index for road construction costs was 187, as compared with 186 in 1943 and 175 in 1942. The equipment index at 255 was up from 1943's 254 and 1942's 242; while the index of "general expenditures" was 188, as compared with

187 in 1943 and 176 in 1942. The indices for the country as a whole (shown in the accompanying table) are broken down in the bureau's compilation into eight regional sets. "The indices," the statement says, "represent territorial index factors and are of value in indicating trends. They are not necessarily applicable for use in the determination of reproduction costs upon individual railroads."

Pointing out that indices for most individual items showed very little change as compared with the previous year, Secretary W. P. Bartel, in a notice accompanying the tabulation, suggested that this was a result of the operations of price control or stabilization at peak wartime price levels.

The account for which the indices are shown are primary accounts designated in the Classification of Investment in Road and Equipment of Steam Roads. They are as follows:

I—ROAD:

1. Engineering
2. Other Right of Way Expenditures
3. Grading
5. Tunnels and Subways

6. Bridges, Trestles, and Culverts
 7. Elevated Structures
 8. Ties
 9. Rails
 10. Other Track Material
 11. Ballast
 12. Tracklaying and Surfacing
 13. Fences, Snowbeds, and Signs
 16. Station and Office Buildings
 17. Roadway Buildings
 18. Water Stations
 19. Fuel Stations
 20. Shops and Engine Houses
 21. Grain Elevators
 22. Storage Warehouses
 23. Wharves and Docks
 24. Coal and Ore Wharves
 26. Telegraph and Telephone Lines
 27. Signals and Interlockers
 29. Power Plants
 31. Power Transmission Systems
 35. Miscellaneous Structures
 37. Roadway Machines
 38. Roadway Small Tools
 39. Public Improvements—Construction
 44. Shop Machinery
 45. Power Plant Machinery
- ## II—EQUIPMENT:
51. Steam Locomotives
 52. Other Locomotives
 53. Freight-Train Cars
 54. Passenger-Train Cars
 56. Floating Equipment
 57. Work Equipment
 58. Miscellaneous Equipment
- ## III—GENERAL EXPENDITURES:
71. Organization Expenses
 72. General Officers and Clerks
 73. Law
 74. Stationery and Printing
 75. Taxes
 76. Interest During Construction
 77. Other Expenditures—General

REGIONS I TO VIII, INCLUSIVE

Tabulation of Indices by Years and by Accounts Applicable to the Entire United States

Acct.	Per cent	1915	'16	'17	'18	'19	'20	'21	'22	'23	'24	'25	'26	'27	'28	'29	'30	'31	'32	'33	'34	'35	'36	'37	'38	'39	'40	'41	'42	'43	'44		
ROAD																																	
1	2.83	101	110	134	159	178	214	175	157	171	171	166	166	164	161	160	152	143	131	127	131	131	133	142	138	137	140	151	175	186	187		
2 1/2		104	107	127	151	172	198	161	154	168	165	161	159	156	155	155	151	143	121	117	127	132	132	141	137	135	134	145	174	185	190		
3	18.19	100	110	130	165	190	250	170	143	160	164	149	153	143	135	133	123	118	106	98	100	101	99	103	93	90	90	99	135	142	149		
5	1.51	103	109	128	150	183	208	179	165	179	179	179	178	169	155	155	143	130	119	111	122	120	130	139	141	140	149	160	192	223	219		
6	9.41	105	111	146	162	178	206	165	160	176	173	171	170	168	164	163	150	134	122	122	136	135	141	155	150	149	156	174	210	227	222		
7	0.04	102	124	169	177	184	210	150	153	173	171	168	165	163	163	162	154	144	129	122	136	136	137	158	150	149	159	175	209	236	231		
8	5.58	100	100	112	133	170	201	189	157	177	175	172	173	175	176	175	170	155	144	139	149	147	150	159	154	158	164	181	199	228	234		
9	8.57	101	106	121	148	152	168	158	144	145	145	144	144	144	144	144	144	144	140	134	123	123	124	143	139	136	138	139	144	144	146		
10	3.39	99	129	198	210	203	209	192	161	182	179	177	177	177	177	177	169	165	163	158	150	147	150	169	169	167	167	170	175	173	172		
11	4.09	103	107	114	140	150	207	191	176	175	175	174	175	176	176	176	168	159	146	146	141	139	140	143	143	143	143	153	170	175	175		
12	4.35	100	100	130	163	175	218	174	165	188	188	188	188	188	188	188	182	175	164	157	159	165	165	169	167	165	165	178	209	241	252		
13	0.65	100	120	138	174	193	211	192	179	183	183	180	178	179	179	177	175	168	147	135	140	140	138	145	145	141	141	150	168	179	179		
16	4.42	101	115	135	154	185	215	192	180	194	193	188	184	189	188	187	182	165	141	145	151	151	157	166	166	166	172	188	208	219	227		
17	0.51	100	115	136	156	185	216	192	178	196	196	189	187	192	191	190	186	166	140	145	150	150	150	162	162	162	177	186	206	226	237		
18	0.82	101	120	159	170	191	213	185	178	187	187	186	182	185	186	184	177	161	147	151	155	155	156	166	166	166	172	185	195	208	196		
19	0.26	101	120	153	160	190	212	181	166	185	185	182	180	183	183	183	174	159	144	149	154	154	153	159	159	159	163	187	205	216	222		
20	2.16	102	118	141	159	188	216	191	180	193	192	188	185	189	188	187	176	161	137	142	147	147	155	165	165	165	176	188	204	216	223		
21	0.09	100	110	128	150	185	214	190	184	197	197	193	190	195	193	193	182	165	137	142	147	147	156	164	164	164	166	200	208	213	217		
22	0.04	100	115	135	155	185	210	193	178	198	198	193	189	193	191	191	184	165	137	142	147	147	154	166	166	166	176	195	207	218	226		
23	0.53	100	114	133	152	178	204	167	158	175	175	174	177	178	176	176	172	158	136	141	146	146	149	153	153	153	161	167	212	226	234		
24	0.44	101	117	145	155	184	204	170	159	176	176	174	174	176	176	176	172	157	136	142	147	147	151	153	153	153	160	185	199	211	215		
26	0.34	103	124	147	156	184	192	191	162	187	179	163	157	163	165	165	150	138	121	119	124	128	131	135	129	129	134	143	156	165	165		
27	1.58	94	106	132	152	165	175	163	158	165	164	162	169	158	155	154	147	138	130	130	133	136	138	143	143	143	146	156	165	176	176		
29	0.16	104	122	141	158	189	218	197	184	196	196	191	186	191	191	189	177	162	138	143	148	148	152	167	167	167	176	194	204	213	219		
31	0.61	109	145	174	189	190	207	175	164	180	174	175	176	176	179	183	175	149	143	143	147	149	150	154	148	148	153	162	167	171	171		
35	0.04	101	117	137	156	186	217	192	179	195	195	190	186	191	190	189	182	164	141	146	151	151	154	161	161	161	168	178	183	198	208		
37	0.08	105	113	127	146	158	170	162	149	151	151	151	151	151	149	148	147	144	138	138	147	147	147	147	147	147	147	147	147	147	147		
38	0.05	100	100	109	129	179	184	202	181	170	173	185	190	190	191	190	160	155	155	150	150	150	160	170	180	180	180	190	200	200	200		
39	1.07	104	108	137	161	182	208	171	164	178	175	171	169	166	165	165	161	153	131	127	139	137	139	152	145	142	146	163	198	208	203		
44	0.95	115	126	155	192	200	210	198	173	183	185	185	186	187	189	191	176	166	155	155	179	179	179	198	200	202	212	224	224	228	227		
45	0.33	115	126	155	192	200	210	198	173	183	185	185	186	187	189	191	176	166	155	155	168	166	171	180	177	180	189	194	194	190	212		

Wtd. Ave.	1.45	73.09	101	110	134	159	178	214	175	157	171	171	166	166	164	161	160	152	143	131	127	131	131	133	142	138	137	140	151	175	186	187
-----------	------	-------	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

Acct.	Per cent	1915	'16	'17	'18	'19	'20	'21	'22	'23	'24	'25	'26	'27	'28	'29	'30	'31	'32	'33	'34	'35	'36	'37	'38	'39	'40	'41	'42	'43	'44		
EQUIPMENT																																	
51	5.42	86	102	145	189	202	248	192	179	197	185	171	191	190	179	188	194	184	168	166	176	188	188	201	201	201	215	230	255	265	265		
52	0.10	100	117	137	184	184	217	197	196	198	199	192	194	202	203	221	221	210	175	165	185	190	190	198	199	190	190	203	185	173	173		
53	11.22	101	148	183	243	267	284	184	156	200	179	171	163	178	169	185	181	161	144	144	165	177	180	191	190	198	204	218	239	254	254		
54	2.16	89	104	132	164	197	213	169	152	192	187	183	189	191	180	193	181	178	161	161	173	182	182	195	195	194	200	213	230	240	240		
56	0.48	107	125	164	227	245	239	200	175	170	170	170	170	170	170	170	165	158	148	148	158	160	160	171	171	171	171	171	171	171	171		
57	0.56	96	128	165	225	244	263	193	168	203	183	188	180	192	184	195	191	178	165	165	177	180	180	197	197	200	208	220	247	254	254		
58	...	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100		



Looking Down the Center Line of the Bridge, Showing the Walkway and Special Design of the Handrail on Each Side

This Walkway Design Is Different

Development on the St. Louis-San Francisco employs scrap rails to support the sidewalk deck and to form the handrail posts on each side of the long bridge

ON the new bridge of the St. Louis-San Francisco built recently over an arm of Denison lake in Oklahoma, one of the unusual and interesting features incorporated in its construction was a walkway on each side of the structure with supports and handrail posts made of light second-hand track rail. This variation from usual methods of constructing walkways on such structures offers a number of advantages, not only in the use of available scrap material and simplified construction details, but also in sturdy construction, which was particularly desirable in the case of the Frisco's bridge.

Long, High Bridge

The bridge is located on the road's new line between Liggett, Okla., and Platter, which was built in connection with a line change occasioned by the construction of the government's large Denison flood-control dam in the Red

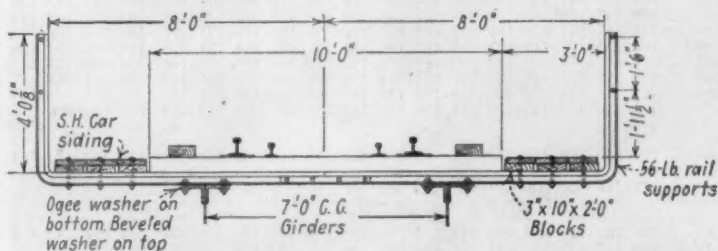
river near Denison, Tex. The bridge, which extends over an arm of the lake formed by the Washita river gorge, is a multiple-span, single-track structure,

4,070 ft. long, with a maximum height of 125 ft. It consists of one Warren truss span 250 ft. long, 51 deck plate girder spans, each 60 ft. long, and 18 deck plate girder spans, each 40 ft. long, all of which are supported on reinforced concrete towers, bents or piers.

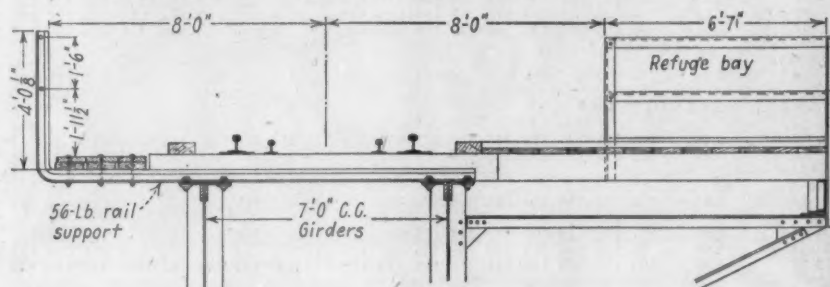
Because of its length, its considerable height above the reservoir level, especially in those seasons when the water will be drawn down, and its location at a point where strong winds generally prevail, it was felt necessary to provide substantial walkways and handrails on this structure for the use of trainmen in case of train trouble while crossing the bridge, and also to afford protection to the maintenance of way forces when working on the track or bridge deck. Therefore, walkway and handrail systems were provided along both sides of the bridge for its entire length, with refuge bays, each equipped for setting off a motor car, spaced about 600 ft. apart along one side.

Each walkway is 3 ft. wide, and consists of second-hand car siding laid longitudinally on rail supports spaced about 7 ft. apart. The rail supports extend between the ties of the track and rest directly on the top flanges of the girders and truss stringers of the different spans, and are bent upward to a vertical position at their ends to form handrail posts. The longitudinal handrails consist of two parallel lines of second-hand 1½-in. boiler tubing, which pass through the webs of the post rails and extend continuously for the entire length of the structure. Standard 26-in. woven wire, attached to the lower pipe rail and to the walkway deck, provides additional protection.

The track rails forming the handrail



CROSS SECTION THROUGH GIRDER SPANS



CROSS SECTION THROUGH GIRDER SPANS AT REFUGE BAY

Two Cross-Sectional Views Through the Walkways on Girder Spans Showing Details of Walkway Supports



Side View of the Completed Bridge Over the Washita River Arm of Denison Lake in Oklahoma

posts and supports for the walkways are of scrap 56-lb. section, in two equal lengths, 12 ft. 2½ in. long, joined together at the center line of the bridge by means of standard angle bars, from which the base flanges had been burned off.

All of the rails are placed head up, and their vertical ends provide posts that are about 4 ft. high.

The Rail-Type Supports

Two holes were shop drilled through the web of the section of rail forming each post to permit the installation of the two lines of pipe railing, the individual lengths of tubing forming the railing being butt welded together and tack welded to every third post.

An arrangement of ¾-in. bolts and washers is used to connect the rail supports of the walkways to the top flanges of the girders and truss stringers, the bolts being inserted through holes drilled in the bases of the rails just outside the edges of the flanges of the girders and stringers. Beveled washers, cut from the flanges of scrap sections of 56-lb. rail and drilled to receive the bolts, are used on top of the rail base, and Ogee washers are used on the underside of the top flanges of the girders and stringers. When the nuts of the clamp arrangement were pulled up tight on the bolts, the threads of the bolts were checked with a chisel to prevent the nuts from becoming loose and backing off. At those points where the top lateral system interfered with the placing of the clamp arrangement on the insides of the flanges, it was omitted.

The plank decks of the walkways throughout the length of the bridge consist of second-hand tongue-and-groove car siding, spiked with 16 d nails to a series of 3-in. by 10-in. wood blocks 2 ft. long, at each support, the blocks being placed side by side and resting directly on the rail supports. The car siding was painted on one side, which was placed face down, and hot creosote oil was applied to the top surface. These decks are fastened to the rail supports

by ½-in., round-head bolts, 10 in. or 11 in. long, as required, which pass through the plank and blocking, and through holes drilled in the bases of the supporting rails. Six bolts are used at each support.

The same type of walkway construction is used at those points where refuge bays are located, except that only one length of 56-lb. rail support is used at each of these points and the handrail posts are omitted on that side of the bridge where the bays are built. The bays themselves, with timber plank decks, are constructed entirely independent of the walkway system, and are supported on brackets connected to the girders.

The walkways on the truss span are the same as those on the rest of the bridge, except for a few places where the pipe handrails are fastened to the

diagonal members of the trusses with eyebolts. In these instances the rail supports were cut off flush with the outside edges of the walkways. At the abutments, the rail supports were also cut off flush with the outside edges of the walkways, and short sections of track rail were set in concrete behind the abutments, to support the handrails.

Amount of Scrap Used

Altogether, approximately 134 tons of scrap 56-lb. rail, 16,150 lin. ft. of second-hand boiler tubing, and 67,525 ft. of second-hand car siding and blocking were used in the construction of the walkways and handrails on the bridge. The design employed was developed by F. G. Jonah, chief engineer of the Frisco.

* * * * *



M. R. S. Photo by A. V. Moore

Motor Car, E. T. O., and Its Crew of Three

Named for the Military Railway Service overseas newspaper, "The Yankee Boomer," this car has been used by the 759th Railway Operating Battalion over thousands of miles of railway line in the European theatre. From left to right, the crew, all former railroaders: Pvt. Murphy F. Raymond, of Willets, Calif. (Southern Pacific); T/Sgt. Stephen A. Manorek, Jersey City, N. J. (Erie); and T/4 John M. Kyle, Ashville, N. C. (Southern).

What Shippers Are Thinking About

Article by C. W. Braden in our Freight Progress Issue, challenging shippers to statesmanlike leadership in the formation of national transport policy, brings widespread and interested comment, largely commendatory

OF the many letters received by *Railway Age* from leading shippers commenting on the Freight Progress Issue (May 19), most of the writers address themselves particularly to the proposals made in the article in that issue by Charles W. Braden. It will be remembered that Mr. Braden—a leader among organized shippers, but voicing only his personal opinions—contended that shippers are outgrowing their traditional attitude of predominant concern for their immediate self-interest in lowest possible short-term transportation charges for their own products and, instead, are recognizing their responsibility for the development and adoption of a national transportation policy, based on economic principles and aimed at the interest of the nation as a whole rather than at the satisfaction of the particularistic desires of individual shippers and receivers of freight.

It was recognized in this article, while the individual shipper has a legitimate selfish interest to protect, that this interest is not actually advanced if it is pressed to the disadvantage of wholesome general business conditions—upon the thriving of which prosperity for each individual business depends. The article drew special attention to the dangers to private enterprise in transportation from unwise short-sightedness which would prevent the railroads from prospering under private ownership, and which might put shippers at the mercy of monopolistic government departments in their purchase of transportation—losing for the shippers their present dominant position.

What Shippers Should Support

Mr. Braden suggested among other things that, in their own interest, shippers should support a uniform national policy of regulation and capital supply toward all agencies of transportation; adequate charges for the commercial use of publicly owned transport facilities; curtailment of the indiscriminate privilege of private transportation to the detriment of common carriers; and requirement of certificates of convenience and necessity for public as well as private expenditures for additional transportation facilities.

The predominant opinion of shippers, as reflected by letters received by *Railway Age*, gives hearty support to Mr. Braden's views—but there are also some vigorous dissents. The head of the traffic department of a large national con-

cern in the food business has this to say:

"I have read the article written by Mr. Braden very carefully, and I believe it is a very clear picture of what our transportation situation is facing and a very well written article setting forth the facts very clearly. I think Mr. Braden is to be congratulated on writing it, and you on publishing it."

From the petroleum industry comes this comment: "The article by Charles W. Braden is quite constructive and we cannot conceive of any fair minded transportation man objecting to proper regulation with the thought in view that if this regulation was under one regulatory body all forms would have an equal opportunity."

Sound Policy Is Needed

The general traffic manager of a nationally known firm in the meat packing industry, writes to thank us for the special copy of the Freight Progress Issue which we sent him, but reminds us that he is a regular subscriber, and adds: "I read Mr. Braden's article, which is a most comprehensive one, and there is really nothing in it to which I can not fully subscribe. There is no question but what every effort should be made in behalf of private enterprise, and in my opinion anyone familiar with transportation, should be in favor of private operation of the railroads."

The chief traffic executive of a company which processes a mineral product reports, while he is in full accord with all Mr. Braden says, that "frankly, I believe the suggestions as a whole are more than will be carried out."

An important government official, without any direct dealings with transportation but with large responsibilities for the welfare of the economy in general, says:

"I was very much interested in Mr. Braden's discussion of the shippers' interest in transportation. I thoroughly agree with him that we must arrive at a sound transportation policy which will be based upon the general public interest and which will continually keep in mind the fitness of each agency of transportation for performing the various services which it is prepared to offer the public. A sound policy would also extend the coordination and consolidation of carriers, eliminating excessive waste and duplication of service and making possible economies and efficiencies in operation which will not only benefit the shipping public but will stimulate the

volume of railroad and general industrial activity and employment."

From a paper manufacturer comes this opinion: "As far as Mr. Braden's article is concerned, it is well conceived and very complete. The writer is in complete accord with it."

From a representative of the iron and steel industry there is this comment: "Public funds are not applied to the building of a railroad depot or transfer yard, to department stores or to office buildings," therefore, to build airports and turn them over to commercial use without full and completely adequate rental is surely harmful to competitive interests and it is not in a public interest to support such construction without an adequate and compensatory user charge. Dredging of rivers and harbors and the construction of locks and dams as now applied at public expense without an adequate return for their use sets up a subsidy harmful to competitive facilities and is certainly not in the public interest."

From the retail merchandising business comes this observation: "We found that we have much in common with the views expressed by Mr. Braden in his able presentation of the necessity for a sound national transportation policy."

Dissenters' Views

The favorable opinion of Mr. Braden's proposals is not, however, unanimous. A manufacturer of industrial machinery makes this comment: "With regard to Mr. Braden's article, it is fine, well written and sincere, but it is just what the railroads want to read and hear, and therefore does nothing to instill the desire in them to go on and improve rail transportation to such a point that competitive forms of transportation will not be an important factor."

"In my estimation, various proposals that have been made from time to time to more or less insure that the railroads would continue to receive certain traffic, is not an answer to their problem, and legislation that is proposed and enacted along this line has the effect of lessening the inspiration to progress with the times, and inducing the carriers to ride along on the panaceas that are offered to insure their getting certain business, whether they are worthy of it or not."

"In the matter of private transportation, I wonder if any private organization would continue to handle its own traffic, if public transportation were

available at the same or lesser cost, and at the same time as efficient. I am inclined to believe that everyone would be glad to unload the responsibilities that go with private transportation, and turn it over to the public agency.

"The criticism of laying out public funds for the building of airports, terminals, etc., is not justified. Here again the question comes up as to whether or not our regular established transportation agencies (the railroads) would have developed the airline if it had been left up to them. I think their record of failure to develop truck transportation when it was in their prerogative to do so speaks for itself."

Not Enough Unselfishness

A well-known traffic manager for a nationally prominent company in the *non-ferrous metals* business says that while, in general, he agrees with Mr. Braden, nevertheless "I do not go along with his views with respect to industries performing their own transportation service, as I feel that an industry has a perfect right—and that right should be maintained—to conduct its own transportation for itself, and I go even further to assert that an industry has a perfect right, through a separate organization, to own and operate common carriers."

From a company manufacturing *glass products* comes the following critical comment: "While Mr. Braden has splendidly outlined many of the problems now operating against a sound transportation policy with excellent suggestions as to their treatment, and has performed a distinct service in bringing them out so clearly for consideration, yet, because of the selfish conflicting interests with powerful opposition lobbies and propaganda, I lack confidence of their statesmanlike solution. Instead, I anticipate a separate piecemeal handling of the various problems as they each become too intensely acute to permit continuance. With some outstanding exceptions, the personnel and policy of the railroads do not evidence any deep spirit of unselfish service; there is much need for improvement."

The traffic manager of a company in the *wholesale iron and steel* business observes: "With respect to the views expressed by Mr. Braden, will say that we do not entirely agree with him and we do not believe that his views will be given serious consideration by those companies who find it necessary to use their own trucks in conducting their business operations."

Quite a number of letters make constructive suggestions beyond those suggested by Mr. Braden. From a *tobacco* concern comes an expression that considerably improved l.c.l. service by the railroads is desirable and a reminder that "as long ago as 1900 we had real rail service on l.c.l. shipments as follows:

"Three-day service from New York to Chicago and St. Louis all rail, 4 days water and rail, at differential rates of 10 cents per 100 lb. when the first class rate to Chicago was 75 cents and to St.

Louis 88 cents per 100 lb. all rail, 40.76 per cent and 43.56 per cent respectively of the 28300 rate.

"Next-day delivery at points within a radius of 150 to 200 miles from large jobbing centers, second-day delivery within 400 miles, third-day delivery up to 1,000 miles, fourth and fifth days up to 2,000 miles and more at points to which package cars were carded.

"The above service was regular and consistent and available at practically all the larger towns on all lines and following day delivery was made at smaller towns beyond the break bulk points.

"The service was obtained by loading package cars daily with all merchandise for the break-bulk points and for several stations beyond by using small cars of 20,000 to 30,000-lb. capacity and running frequent trains.

"The New York-Chicago rate was the basis for practically all rates except those by water coastwise and intercoastal steamship controlled.

"Coastwise service to the South and Southwest, also the Pacific Coast, was economical and unexcelled."

A manufacturer of *construction equipment* makes a similar observation, as follows: "There is a crying need in the transportation field for a publication of some sort listing all of the package-car services furnished by the various carriers and the points at which they break bulk. This has been partially covered by bulletins of the National Industrial Traffic League. We have written to a number of carriers, and it is just like pulling teeth to get their package-car schedules.

"The l.c.l. business should be very attractive to the rail carriers. The rates are high, and there is quite a large volume of this type of business that moves in a year's time. The average freight solicitor calling on an industrial traffic man today is interested only in the carloads he receives; and knows nothing about the merchandise service."

Fly-by-Night Truckers

A *wholesale distributor of perishables* makes the following friendly critical comment: "Truck competition was a nightmare with us before the war and we fear it will again return as one, if not our leading, post-war problem. We are particularly referring to itinerant truckloads of fresh fruits and fresh vegetables hauled from producing sections to our middle-western territories, and there sold in competition with established business. This is made much easier by the provision in the federal law which permits fresh fruits and fresh vegetables to be trucked around the country without any sort of regulation.

"The question raised by Mr. Braden as to whether it is in the public interest to restrict private trucking, of course, goes much beyond the above problem. If it can be established that such restriction is in the public interest on the ground that only by such restrictions can our vital railroad system be maintained in strength and vigor, we think a legal case can be found for doing so, but

we would not like to encourage further encroachment upon private business. That isn't the way of progress, is it?

"We think government should permit abandonment and encourage consolidation of railroads instead of opposing them. Commercial clubs and chambers of commerce who oppose such things so vociferously are short-sighted, it seems to us.

"Railroads should be permitted and encouraged to go into the trucking business and airplane business. That is the best way we know of to correct the discrimination against railroads, of which they complain rightly, in the matter of government aid to their competitors.

"Why should it take second morning for merchandise from Chicago to Minneapolis when trucks make the run over night? Why should it take seven days to Chicago and ten days to New York to get California fruit to those markets?"

Improvement Suggested

An *aircraft manufacturer* reports: "We have experienced considerable inconvenience and delay in making shipments via railroad l.c.l. service in recent months and for this reason have been compelled to route much of our business via other means of transportation. We believe that unless the rail carriers endeavor to improve this service in the post-war period, much of this traffic will move via other means of transportation especially via motor freight. We might further state that in order to trace or intercept shipments, we are compelled to route shipments via carriers who maintain definite transfer and forwarding records even though their routes may be more circuitous than via other lines."

Another *paper manufacturer* brings to mind the advisability in proposing new legislation for improvement of transportation conditions, that such legislation already "in the mill" be not overlooked. The best thing in his estimation, to improve the railroads' post-war future would be to enact the Bulwinkle Bill, legalizing railroad collaborative practices in rate-making under I. C. C. supervision; and by the repeal of land-grant rate reductions. He closes his thoughtful letter by expressing regret at the tremendous economic loss in the mounting of freight claims to over \$50,000,000.

Most of the writers express their friendship to the railway industry, and their appreciation of the Freight Progress Issue of *Railway Age*. From a *retail merchandise* concern comes the following comment:

Signs of Growth

"I greatly appreciated the current Progress Issue of *Railway Age*. The highly informative text is well written and full of interest. The advertisements are most alluring to a one-time small boy who found fascination in the then primitive railroad devices and switch yards, and who gloried in the local

switchman's triumphant exhibition of his specialty—the flying switch."

And a manufacturer of a *food product* says: "We have always been most thankful for your courtesy in sending us the annual Freight Progress Issue of *Railway Age*. It is a reminder once a year that railway "age" is merely relative—that actually railroading is in its infancy—for it shows the excellent signs of growing pains through continual improvements in the public interest of increased efficiency, safety and low cost of carriage. Railroading is *big* private enterprise. It must remain so if it is to continue the same pattern of growth. It must be entitled and permitted to ex-

pand within itself—also, through consolidation with and coordination of, other modes of transportation."

An Annual Record

The head of the traffic department of a concern in the *food manufacturing* business makes this generous observation: "The Freight Progress Issue of *Railway Age* is just as informative as it ever was. The articles, the advertisements and the illustrations are splendid. This publication more than any other embodies an annual record of the progress of American railroads on matters of equipment, operation and efficiency."

COMMUNICATIONS . . .

Railroads Slow to Defend Themselves

TO THE EDITOR:

I enclose, as of possible interest, self-explanatory correspondence to the "Perth Amboy Evening News." I believe that such publicity action by all the railroads, rather than by a single one, would have a much greater effect in getting across to the public the injustices of recent wage demands.

Your July 21 editorial on the subject of "Atrocities Reports on Railroads' Handling of Troops," which was widely reprinted because of your efforts to get it into the newspapers' hands, was an excellent and a very necessary job, but it was unfortunate that it was necessary for you, rather than the railroads' official organizations, to refute the smear.

WM. WYER
Chief Executive Officer, C. N. J.

Mr. Wyer's letter to the Perth Amboy Evening News reads in part as follows:

"President A. F. Whitney of the Brotherhood of Railway Trainmen made some interesting comments in his recent letter to the Perth Amboy Evening News, in which he attempted to justify the train service unions' demands for 25 per cent wage increases plus working rule changes which make their total demands add up to a wage increase of around 70 per cent, but he passed over a number of pertinent points. I am not certain that I know exactly what he means when he refers to 'feather-bedding,' but I am wondering if that term would apply to some of the demands served on the railroads, such as these:

"If we send a crew from Jersey City to Elizabethport on a regular passenger train so that they may take out a train of their own from Elizabethport, we are asked to hand out a day's pay for this 15-minute ride, plus another day's pay in connection with the job to which they are going. If, however, we had the crew take some empty equipment to this same spot, then we would not be penalized an extra day's pay. This rule would simply force us to increase the movement of empty equipment around the

country, which in our opinion is an indefensible waste either in war-time or peace-time.

"If, due to engine trouble, one of our freight trains stalls on a hill, and the crew must cut the train in half, pull the front part to the top of the hill and then go back and get the other half, we are asked to come through with an extra day's pay, even when they can do this and still complete their run in eight hours.

"Suppose we have a freight train with important war materials moving west to the Pacific coast, which has left Jersey City and is expected to arrive at Allentown about 9 o'clock. Due to the urgency of the shipment (and all rail freight must for that matter move quickly if we are to furnish effective competition to trucks and airplanes) we must move the train west from Allentown—where crews are changed—with a minimum of delay. We, therefore, call a freight crew to take over the train at Allentown at 9 o'clock. However, due to an unforeseeable delay the train does not arrive at Allentown until 10 o'clock. A new demand provides that after a 15-minute grace period we must pay full time for any such delays, in addition to the regular day's wages. Under the circumstances described, the crew called to take this train from Allentown to Wilkes Barre would receive, therefore, 45 minutes' time, in addition to its regular day's pay, even though they reach Wilkes Barre within 8 hours from the time originally called at Allentown.

"If a yard crew at the completion of its regular assignment is required to do as little as one minute of additional work in the same area but not directly in connection with its regular assignment, the brotherhoods would have us pay each crew member an extra day-and-one-half's wages!

"They propose limiting us to 70 cars in freight trains and 14 cars in passenger trains. We now operate as many as 120 cars in a freight train, and 20 cars in passenger trains, the latter being military movements. This would mean an increase of 70 per cent in freight train crews, and also that expensive modern locomotives would be used at far less than capacity, a waste of man-power and equipment. They

also propose that double-heading, using two locomotives to a train, as we must do on some of our mountain grades, be prohibited, requiring two trains to do the work of one, at an increase of 42 per cent (from the present seven to the proposed ten) in crew members for this particular job.

"They ask that the work-day for suburban service be reduced to six hours instead of the present eight hours, that passenger trainmen be paid a day's pay for each 100 miles run, instead of for each 150 miles as at present, and that overtime in passenger service be paid at time-and-one-half, regardless of a large amount of compensated idle time between runs, rather than at straight time. All of this adds up to wasted man-power and needless expense, even though our passenger service already loses nearly \$6,000,000 yearly.

"Even now, the Jersey Central and other railroads are hampered by a vast number of similar rules. . . . Such working rules, whether you call them 'feather-bedding' or something else, add up to wasted man-power in war-time, when the government agencies are making every effort to recruit railroad man-power to supply the job of overpowering Japan, and create needless waste and expense in peace-time. . . .

"We know that these demands did not originate with our own employees, for whom we have the greatest personal respect, but were drafted at the organizations' national headquarters, which sent printed copies to the local organizations with instructions to serve them on individual railroads such as the Jersey Central. It is only human to attempt to get as much pay as possible for the least amount of work, but the responsible national leaders of the organizations should know that the average railroad cannot successfully meet the severe competition we shall have to meet after the war and efficiently serve the public at present low rates if we are burdened with such unreasonable and wasteful restrictions."

Jobs for M. R. S. Officers

ILLINOIS

TO THE EDITOR:

I am wondering if some collective effort should not now be made on behalf of the older railroad men who so patriotically volunteered for duty as emergency officers in the military railway service, to obtain for them an opportunity to return to their civilian jobs.

It seems obviously unfair to keep men of their critical economical ages such a long time away from their regular jobs, particularly when, as it is reasonable to suppose, younger officers have by this time been trained to fill the older officers' jobs—and, for the good of the service, the younger officers should be promoted.

It is my thought in this matter that the older officers are in a rather helpless position: The emergency which caused them to volunteer has passed, at least in their minds, and yet they can do nothing to free themselves without loss of standing. Their military work has not, in most cases, had the stimulation of combat contact nor have

these officers in many cases even had the stimulation of many advances in rank.

C. I. R.

Complaint from T. V. A.

KNOXVILLE, TENN.

TO THE EDITOR:

We have read the editorial in your May 12 issue entitled "Do Railroad Employees Favor Socialized Power?" which criticizes T. V. A. power operations on the basis of a highly distorted interpretation of T. V. A.'s financial statements and an apparent lack of knowledge of the coal situation in this area.

We do not know, of course, who supplied you with the financial interpretation. Whoever it was must have a highly selective blind spot to enable him to pick out the figure of \$763,666,809 as the power investment of T. V. A. and at the same time fail to see the actual power investment of \$359,312,060, only a quarter of an inch away.

The basic misrepresentation in this editorial consists in assigning to power operations both the capital costs and the net expenses of non-income-producing activities, such as navigation, flood control, development of new and improved fertilizers, agricultural and industrial development activities, forestry and reforestation, and research, which in other sections of the country are carried on as governmental functions and not charged against one segment of the population, the electric rate-payer. To attempt by such stratagems to show a T. V. A. power operations "loss" is equivalent to showing a "loss" for a city-owned water department by charging against its revenues the costs of the health and fire departments, street maintenance, and the operation of municipal hospital and public library.

The editorial compares the payments to states and counties with the total taxes of utility companies, including federal income and excess profits taxes, amounting to 23.8 per cent of total operating revenues. This comparison, of course, disregards completely the fact that the entire net income of T. V. A. is the property of the federal government. It also disregards the fact, as reported by the Edison Electric Institute, that \$210,000,000 of utility taxes, or more than 7 per cent of total operating revenues, was represented by *excess profits taxes*. As you may know, a number of state regulatory commissions are taking action to recover at least some of the money represented by these taxes for the benefit of the consumer. T. V. A. power operations in the fiscal year 1944 produced \$35,430,000 in total operating revenues and a power net income, after all power expenses including, as the editorial points out, \$2,168,798 to state and county governments in lieu of taxes, of \$14,116,000.

The T. V. A. power net income plus the payments to states and counties under Section 13 of the T. V. A. Act amounts to 46 per cent of total power operating revenues. If interest at 2 per cent were charged against the average power investment in the fiscal year 1944, amounting to \$357,000,000, the remaining net income plus Section 13 payments would amount to nearly 28 per cent of power operating revenues, as

Danger in Federal Guarantee of "Full Employment"

"The very title—'Full Employment in a Free Society'—under which Sir William Beveridge has put forward the British program of national socialism from which the Murray-Kilgore bill [the "full employment" bill now pending in Congress] has been copied, defines the issue and lets the cat out of the bag. Step by step as he presents the attractions of the idea of full employment as the aim of domestic and international policy for the masses he is compelled to expose all the price tags, political accessories and governmental gadgets called for in the fine print of the contract, and it is clear that the same attachments come for the American as for the English model of the governmental millenium. . . .

"I can sum up for you the written and unwritten conditions of the new social security contract in these terms: The government will give you full employment and guarantee your income provided you will let it use your money as it pleases; if you will buy for your own use what it tells you, at the price it fixes, or let it do the buying for you; if you will save as much money as it says and let it invest it as it pleases; if you will work at whatever it says, when and where it says, and as much as it says for what it says you can be paid; and if you will hear, read and think what it tells you and keep your mouth shut.

"Beneath the elaborate and complex apparatus of fiscal and monetary policy, social insurance, price and wage fixing,

—President Virgil Jordan of the National Industrial Conference, in an Address to the N. Y. Rotary Club (as Reported in the Commercial & Financial Chronicle)

rationing, conscription, and propaganda by which it is operated in the modern state, the compulsory collective economy—which this contract calls for to replace the voluntary competitive economy—is simple and primitive bargain. It means merely that if most men in any community expect or compel a master—man or government—to promise to employ, support or protect them as a matter of legal or political right, they must obey that master, do what work he makes them, live and move where he tells them, eat, wear and buy what he tells them; save what he tells them, and ultimately believe and say what he tells them.

"Even if they do all of that, in the end their master can guarantee support and security to them only if some of them are able and willing to produce by their work somewhat more than the master permits them to consume for themselves, and since those who are able to produce more than they consume won't keep on working forever to support the rest, the standard of living must ultimately descend to the subsistence level unless the community can beg, borrow or steal enough wealth and labor from some outside source to keep up the show. This is what has been happening in Europe and Russia in the past five years, and it will begin to happen in England and America if they follow the road laid down in the full-employment bill and the Beveridge program."

compared with 23.8 per cent of operating revenues in total taxes of utility companies or 16.7 per cent in taxes exclusive of excess profits taxes. Or, to put it another way, T. V. A. power operations provided sufficient revenues to cover all power operating expenses including depreciation, to provide interest at 2 per cent on the average power investment, and provide a surplus of more than \$7,700,000. This surplus, plus payments in lieu of taxes under Section 13 of the T. V. A. Act, exceeds the 23.8 of total operating revenues by more than \$1,400,000 and exceeds 16.7 per cent of total operating revenues, representing the rate of utility taxes exclusive of excess profits taxes, by nearly \$4,000,000.

Your statement that the coal industry is being "uneconomically undermined" by T. V. A. hydro-power developments also does not square with the facts. The T. V. A. itself, in the fiscal year 1944, purchased 1,100,000 tons of coal for use in generating electricity, plus 178,000 tons for other operations. The 1,100,000 tons is three times the amount of coal used in the states of Alabama, Tennessee, Georgia, and Mississippi in 1929, the pre-depression peak year for power generation. In 1943, these states used 2,371,000 tons of coal to produce electricity, or seven times as much as the 334,000 tons used in 1929. In 1939 and 1940, before the war, the total had reached 1,008,000 and 1,346,000 tons respectively.

Both T. V. A. and private power companies in the area have built new steam generating stations or added steam generating capacity. It is difficult to see how the coal industry, including transportation, has been undermined by a seven-fold increase in business.

The increase in use of coal for power production has been brought about by the increased demand for power, stimulated by low-rate policies on the part of T. V. A. and private utility companies in the area. Power production has increased 950 per cent in this area since 1933, as compared with a 175 per cent increase in the nation. This demonstration would seem to point an opportunity for expansion in the use of coal, particularly since large areas of the country must depend largely or almost entirely upon fuel generated power. For example, to bring the 27,400,000 domestic consumers in the country up to the average electricity use in the T. V. A. area in 1944 (1,713 kw.h. as compared with 1,151 kw.h.) would require more than 15 billion kw.h. a year. If fuel plants produced two-thirds of the additional power, the increased demand for this one class of customer would require the equivalent of about 6,000,000 additional tons of coal each year.

W. L. STURDEVANT
Director of Information, T. V. A.

[Our answer to the foregoing letter appears in the editorial pages herein.—Editor.]

Railroads-in-War News

6 Months Net Income Was \$325,000,000

Net railway operating income
for the same period was
\$535,786,815

Class I railroads in the first six months of this year had an estimated net income, after interest and rentals, of \$325,000,000, as compared with \$322,533,400 in the first half of 1944, according to the Bureau of Railway Economics of the Association of American Railroads. The six-months net railway operating income, before interest and rentals, was \$535,786,815, compared with \$552,425,259 in the corresponding 1944 period.

June's estimated net income was \$66,100,000, compared with \$61,337,052 in June, 1944; while the net railway operating income for that month was \$96,114,902, compared with \$99,517,169 in June, 1944. In the 12 months ended with June, the rate of return averaged 3.91 per cent, compared with 4.34 per cent for the 12 months ended June 30, 1944.

Operating revenues for June totaled \$820,389,757 compared with \$799,475,442 in June, 1944, while operating expenses totaled \$541,707,405 compared with \$518,466,530. Gross in the six months totaled \$4,699,870,508 compared with \$4,636,071,620 in the same period of 1944, or an increase of 1.4 per cent. Operating expenses in the six months amounted to \$3,195,745,900 compared with \$3,077,777,848 in the corresponding period of 1944, or an increase of 3.8 per cent.

Class I roads in the six months paid \$875,634,002 in taxes compared with \$908,937,391 in the same period in 1944. For June alone, the tax bill amounted to \$165,582,447 an increase of \$259,709 or 0.2 per cent over June, 1944.

Seventeen Class I roads failed to earn interest and rentals in the six months, of which nine were in the Eastern district, one in the Southern region, and seven in the Western district.

In the East and South—Class I roads in the Eastern district in the six months had an estimated net income of \$131,000,000 compared with \$139,498,513 in the same period of 1944. For June alone, their estimated net income was \$23,900,000 compared with \$27,053,305 in June, 1944. Those same roads in the six months had a net railway operating income of \$221,807,007 compared with \$237,560,849 in the same period of 1944. Their net railway operating income in June amounted to \$39,712,428 compared with \$46,269,733 in June, 1944.

Operating revenues in the Eastern district in the six months totaled \$2,003,183,550 a decrease of 1.8 per cent compared

Army Regard for Civilian Needs

One would have to believe in miracles to assume that the equipment needed for the Army's redeployment program could be provided at short notice without creating serious transportation bottlenecks for essential freight and civilian passenger travel. Ordinary prudence should have persuaded the Army authorities to inquire most carefully about the capacity of the roads to meet extraordinary demands upon their very inadequate equipment and about the effect of redeployment upon civilian transportation. This they never did. . . .

So long as the roads succeed in getting troops and supplies to Pacific destinations, according to the acting chief of the Army Transportation Corps, Major General Franklin, there can be no railroad crisis. This refusal to look at the effects of inadequate liaison with the O. D. T. upon our civilian life is appalling. The Army seems to entertain the illusion that redeployment of troops involves nothing more serious for civilians than a sacrifice of creature comforts. . . .

—From the Washington Post

with the same period of 1944, while operating expenses totaled \$1,463,183,025, an increase of 2.4 per cent.

Class I roads in the Southern region in the six months had an estimated net income of \$49,000,000 compared with \$56,003,874 in the same period of 1944. For June alone, they had an estimated net income of \$7,500,000 compared with \$9,130,200 in June, 1944. These same roads in the six months had a net railway operating income of \$80,450,968 compared with \$88,441,266 in the same period of 1944. Their net railway operating income in June amounted to \$11,975,523 compared with \$13,631,274 in June, 1944.

Gross in the Southern region in the six months totaled \$671,568,330, an increase of 0.03 per cent compared with the same period of 1944, while operating expenses totaled \$431,791,415 or an increase of five per cent.

In the West—Class I roads in the Western district in the first months had an estimated net income of \$145,000,000 compared with \$127,031,013 in the same period of 1944. For June alone they had an estimated net income of \$34,700,000 compared with \$25,153,547 in June, 1944. Those same roads in the six months had a net railway operating income of \$233,528,840 compared with \$226,423,144 in the same

(Continued on page 258)

Break All Records in Troop Movements

Huge volume handled so neatly
that 2-hour delay brings
investigation demand

Following announcements of high government officials—reported in *Railway Age* last week—that closer cooperation between the Army, the Office of Defense Transportation and the railroads had been attained, and that smoother handling of troops returning from Europe was expected to result from that development, reports indicate that the railroads have continued to break records in performing their part of the tremendous task of "redeployment." Nevertheless, occasional "atrocities" stories, emphasizing alleged deficiencies in the equipment and service provided for these troop movements, continue to appear in the daily newspapers.

Schedules Exceeded—The largest single rail movement of troops during the war was accomplished over the last week-end, starting at 8 p. m. on August 3, according to a War Department statement. In a period of nine hours more than 20,000 men left the Camp Kilmer, N. J., "staging area" for the Port of New York, en route to 22 different Army reception stations throughout the country. The railroads provided 31 trains, including 331 Pullman sleeping cars, 100 coaches, and 41 kitchen cars, to accommodate these soldiers, who had arrived at New York on the steamers "Queen Mary" and "Hermitage." Advance schedules had provided for the departure of these trains at 20 min. intervals, but a later decision to increase the number of sleeping cars used—so that no man traveling more than 12 hours would be without a berth—made it necessary to exceed this program in order to get the last train started by 4:40 a. m. August 4, the scheduled time.

The record-breaking movement out of Camp Kilmer completed a week in which the nation's railroads were called on to make 1,238 organized troop movements, of which 726 were handled in sleeping cars and 512 in coaches. Of the movements in coaches, 165 were for trips of 12 hours or less, 183 were more than 12 hours in length but not more than 24 hours, and 115 required more than 24 hours but involved travel for one night only. In 49 cases, or less than 10 per cent of the number of coach movements, the trip extended over more than one night.

Meanwhile the spotlight of public attention became focused, not on this achievement, but on a report that one train carrying troops from Camp Kilmer to Camp Grant, Ill., was "sidetracked" on the Penn-

sylvania, near Columbia City, Ind., for two hours, while "civilian" passenger trains went by. Picking up this story, Senator Stewart, Democrat of Tennessee, on August 6 wrote to O. D. T. Director J. Monroe Johnson suggesting that the situation was of sufficient public concern to be "publicly investigated."

Two-Hour Delay—The train involved, which was said to consist of "old, hard, dirty, packed coaches," without adequate toilet facilities and with no policing of quarters, was held on a siding, it was reported, while "seven luxury express liners roared by, bearing civilian passengers." Senator Stewart expressed the opinion that troops returning from overseas surely could be given "decent trains on which to ride in this country." It is "the least we can do," he continued, "to see that they are not sidetracked for the comfort and convenience of plush-pullmaned civilians."

The investigation for which the senator asked should bring out, he said, "who was responsible for our troops traveling on such a train and who required that they—after a long, dirty and exhausting journey—lie out on a siding while luxurious civilian trains passed by."

While "redeployment" proceeded at an unabated rate, the movement of military and civilian freight continued to tax the capacity of western roads, and "critical" car shortages were reported from some sections of the country, according to Colonel Johnson. While "a great majority" of shippers are giving full cooperation in obtaining the maximum use of the available

cars, he said, there has been a "post V-E Day tendency on the part of some shippers to relax their efforts" in this direction. To correct such conditions, it was explained, O. D. T. regional offices have been making checks on the observance of General Order 18A, which requires that cars be loaded to prescribed minimum weights, and such checks will continue.

The O. D. T. statement emphasized that "the traffic situation on the western lines has never been more critical. All types of cars carrying dry cargo move to the Pacific Coast states in greater volume than loads are available eastbound from that area. Any reduction in the number of loaded cars carried westbound—through heavier loadings of such cars—will result in a reduction in the eastward movement of empty cars."

Unequalled Freight Traffic—Late figures compiled by the Association of American Railroads, to be widely distributed in a booklet summarizing comments of the press on the railroads' 1945 record, stress the fact that about 65 per cent more export freight is now being delivered to the Pacific Coast ports than at this time last year. At the same time, other records are being broken. In the month of June there were loaded and moved 95,631 cars of fresh fruits and vegetables—more than ever before in a single month. In June and July 21,174 carloads of watermelons were handled, a record for the past 20 years, and a record-breaking peach crop of 20,650 cars.

In the first 30 weeks of this year, that is,

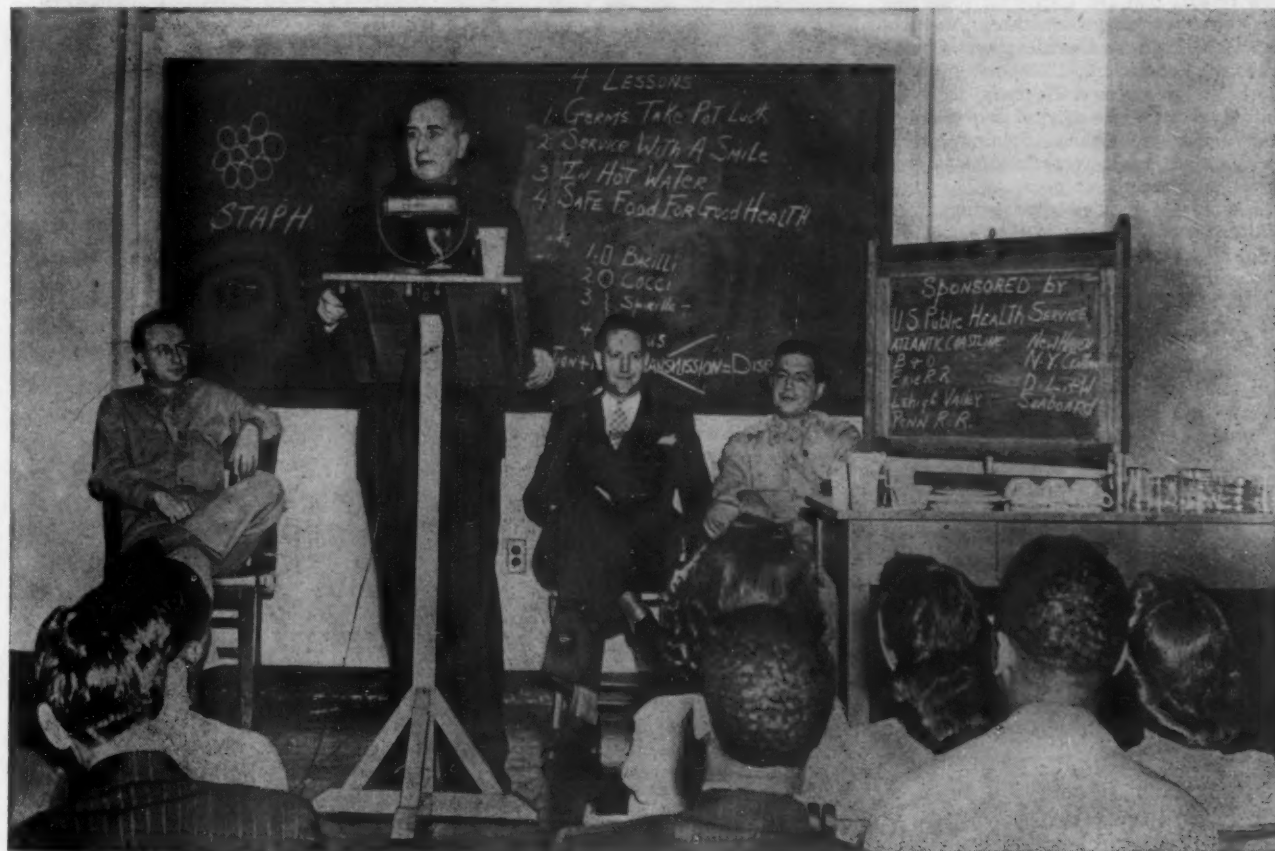
up to July 28, loadings of grain and products totaled 1,500,451 cars, which the A. A. R. terms an all-time record for a comparable period. On July 31 there were 208,000 bushels of grain stored on the ground on railroad rights of way, as compared to 4,562,000 bushels at this time last year.

9 Railroads Found Dining Car Food-Handlers' School

Nine eastern railroads, together with the United States Public Health Service and the City of New York, which has donated the site, have founded one of the first food-handlers' schools for dining car employees in the country. More than 6,000 of the railways' personnel of cooks, stewards, waiters and dishwashers are expected to attend the 50 classes scheduled for the 6 weeks' period at the Central Harlem Health Center, 136th street and Fifth avenue, New York.

Head of the railroad committee managing the school is Carl Schiller, of the Pennsylvania, while the two "professors," Capt. Nicholas G. Kitson, of Haverhill, Mass., and Lt. Sidney Rebhun, of New Haven, Conn., are from the U. S. Public Health Service. Other railroads with a hand in the management are the New York Central, New Haven, Baltimore & Ohio, Lehigh Valley, Erie, Lackawanna, Atlantic Coast Line and the Seaboard.

According to Mr. Schiller, the courses, which include lectures on germs, sanitary practices on dining cars, personal hygiene



Chairman Schiller Opens the First Class for Dining Car Employees. Seated left to right: Lt. Rebhun; Laurence R. Swain, of the New Haven; and Capt. Kitson

and health, have been selected because of "the need for emphasis on public health and sanitation" at a time when the traveling population exceeds that "never before witnessed."

One effect of such training, Mr. Schiller suggests is "that when employees understand the reasons for the high standard of sanitation set by the dining car service, they are naturally more willing to cooperate. Their duties take on an importance and significance which previously they did not fully appreciate."

Permit for Group Travel

By General Permit No. 1 under its General Order 57, the Office of Defense Transportation has authorized "group travel," which was prohibited by the order, when the persons so traveling are children and their supervisors returning to their homes from summer camps. Another section of the same permit authorizes the sale of tickets to or through travel agencies when such tickets are for the use of persons traveling "at the request or order of an agency or department of the United States" and "under the general supervision" of that agency or department.

Chinese Railway Expert Aids U. S. Transport Men

Dr. Cheng Hwa, railroad and bridge engineer, who once worked for the Baltimore & Ohio as a designer, is said to be the first Chinese professional man to offer his services to American forces on the "dollar a year" basis, and Headquarters, Services of Supply at Kunming, China, now reports that Dr. Cheng for some time has been working with three American army railroad authorities on Chinese transport problems. "Results of their work," it is reported, "already are being felt in greater efficiency of movement of war supplies to Chinese fighting forces." Bridge and track reconstruction also is under way, the report goes.

A graduate in civil engineering at the University of Michigan, in 1914, Dr. Cheng won his master's degree at Cornell and two years later his doctorate. Returning to China, in 1920, he held responsible positions on several major railroads. He served also as chief of the planning division of the Ministry of Railways.

When he volunteered his services to the Americans, Col. C. C. Benson, former chief of the Transportation section, Washington, D. C., said he could not accept Dr. Cheng's "valuable services on a voluntary



Photo by U. S. Army Signal Corps

Conference of Transport Men

(Left to right)—Lt. Col. George R. Branch, former division superintendent of the Rock Island; Dr. Cheng, and Maj. Fred A. A. Schilling, former master mechanic for the Southern Pacific.

basis." "Already he has more than repaid any remuneration we could pay him," Colonel Benson has remarked.

General Booth Gives Legion of Merit to 3rd M. R. S. Officer

Col. Aubrey M. Bruce of Alton, Ill., on leave from the Illinois Terminal Railroad at St. Louis, has been awarded the Legion of Merit for "exceptionally meritorious conduct in the performance of outstanding service" (from February 9, 1943 to May 17, 1945) as superintendent of equipment for the Third Military Railway Service in the Persian Gulf Command, Headquarters now reports.

Colonel Bruce received his award from Brig. Gen. Donald P. Booth, commanding the P. G. C., at special ceremonies in Teheran, Iran. "As superintendent of equipment when the Third Military Railway



Col. Bruce (right) Receiving the Congratulations of His Commanding General Booth

Service assumed operation of the Iranian State Railway," the citation said, in part, "Colonel Bruce demonstrated a high degree of leadership and ability in coordinating and supervising the maintenance and repair of the railway equipment."

A veteran of World War I, and a reserve officer when called to active duty in October, 1942, Colonel Bruce was head of the 3rd M. R. S. for two months prior to its dissolution on July 1.

P. G. C. Army Camps Named for Deceased Transport Men

While no main-line accidents along the Iranian State Railways during American occupation resulted in loss of life, several U. S. camps in the Persian Gulf Command bear the names of soldiers of the Military Railway Service who lost their lives in World War II, Headquarters now reveals.

The 3rd M. R. S. camp at Doroud, one of the first to honor an army railroader, has been named Camp Gillies, for Col.

John Arrin Gillies, former general manager of the Santa Fe's western lines, who, at the time of his death in a plane crash within sight of Doroud on February 28, 1942, was a member of the U. S. Military Mission to Iran and Iraq. Camp Gillies was established the following February.

Two camps bear the names of men who died during training in the States. Camp Schindler, at Qum, is named for Pfc. Richard M. Schindler, of the 730th Railway Operating Battalion, who was killed October 13, 1942, at Fort Wayne, Ind. Camp Lowe, at Ahwaz, is named for 1st Lt. William A. Lowe, of the 711th R. O. B. from its activation until his death July 10, 1942, at Camp Claiborne, La.

Two railroad camps honor former Pennsylvania Railroad presidents who played important roles in other wars. Camp Scott, at Arak, is named for Col. Thomas L. Scott, of the U. S. Volunteers, who, in the Civil War, inaugurated the movement of troops by rail and is considered to be the founder of the M. R. S. In Teheran, Camp Atterbury, headquarters of the 3rd M. R. S., is named after the late Brig. Gen. W. W. Atterbury who, in World War I, was assigned by Gen. John J. Pershing to head the M. R. S. of the A. E. F., in France.

6 Months Net Income Was \$325,000,000

(Continued from page 256)

period of 1944. Their net railway operating income in June amounted to \$44,426,951 compared with \$39,616,162 in June, 1944.

Operating revenues in the Western district in the six months totaled \$2,025,118,628, an increase of 5.2 per cent compared with the same period of 1944, while operating expenses totaled \$1,300,771,460, an increase of 5.1 per cent.

	Month of June	
	1945	1944
Total operating revenues	\$820,389,757	\$799,475,442
Total operating expenses	541,707,405	518,466,530
Operating ratio — per cent	66.03	64.85
Taxes	165,582,447	165,322,738
Net railway operating income (Earnings before charges)	96,114,902	99,517,169
Net income, after charges (estimated)	66,100,000	61,337,052
Six Months Ended June 31, 1945		
Total operating revenues	4,699,870,508	4,636,071,620
Total operating expenses	4,195,745,900	3,077,777,848
Operating ratio — per cent	68.00	66.39
Taxes	875,634,002	908,937,391
Net railway operating income (Earnings before charges)	535,786,815	552,425,259
Net income, after charges (estimated)	325,000,000	322,533,400

Light-Loading of Grain Cars

Upon the suggestion of the Railway Transport Department of the Office of Defense Transportation, W. C. Kendall, chairman of the Car Service Division of the Association of American Railroads, has pointed out that O. D. T. General Permit No. 1-4, which authorizes 5-ton minimum loading of box cars, under certain conditions, when destined to points in the western grain states, is not intended to apply to cars loaded within that territory

for destinations therein, but only for movement direct to destinations in that region from origin points outside that section.

W. P. B. Says Railroads Must Now Have More Steel

Railroads are among "war supporting" industries which now "must have increased amounts of steel," for "tremendous demands" have been placed upon them through the war years "while they were kept on short rations because of competition from armaments," said the War Production Board's August review of "the production picture."

The comment on "civilian" steel stated that 11,734,000 tons of steel products would be available in this year's fourth quarter for civilian uses. This is more than the quarterly production of the pre-war year 1937, but W. P. B. warned that it will not mean "plenty of steel to meet all demands." The needs of the "war supporting" industries for more steel than they used in 1937 is cited as one reason for this lack of "plenty," the statement continuing to make the foregoing reference to railroad requirements. Also, it said that "our highway transportation fleet must be rebuilt."

With respect to copper and aluminum, the review states that cutbacks are large enough to free for civilian use all "that industry is likely to demand." The magnesium picture is similar, but tin continues "extremely tight."

Supply Services Perform Big Job in China Theater

The U. S. Services of Supply in China is "doing a whale of a job" at railway sidings, according to Lt. Col. Leonard A. Duff, of Chicago, base transportation officer at Kunming. Petroleum, ammunition, clothing, even personnel, are received and checked daily by the supply men with the help of hundreds of Chinese laborers.

Under the direction of S/Sgt. Joseph Lebowitch, who formerly worked in the division superintendent's office of the Southern Pacific, at Sacramento, Calif., equipment and supplies coming via the Stilwell

road from India are hastened to the "front."

Two railroads carry supplies into forward echelons, according to Headquarters in this theater. One of them, the Yunnan-Annan railroad once ran south to Hanoi in Indo-China, and the other, the Yunnan, Szechwan, was carried piece by piece into Free China by Chinese patriots, who feared its capture. Tonnage, it is said, is increasing constantly on both railroads, with the opening of new supply lines from India.

I. C. C. Service Orders

As a result of an acute shortage of ice in the territory west of the Mississippi and of delays to the use and movement of refrigerator cars for icing and reicing, the Interstate Commerce Commission has issued several service orders restricting refrigeration of certain commodities, and icing and reicing of others, when shipped from various western states.

Restrictions on refrigeration of potatoes originating in Arizona or California established under Service Order No. 308, have been lifted by No. 308-A, effective August 6, which vacated that order, but No. 345, effective on that date and expiring, unless otherwise provided, on October 20, has made similar restrictions on the reicing of refrigerator cars loaded with potatoes applicable to shipments originating at any point in or west of the states of Montana, Wyoming, Colorado, or New Mexico, and also in the Texas panhandle. In general, this order limits to one the number of times such cars may be reiced, after initial icing, in the territory west of the Mississippi river except that shipments to points in Texas or Louisiana, west of the Mississippi, may be accorded two reicings in transit.

Exceptions from the requirements of this order, however, permit reicing by the Northern Pacific, by the Milwaukee (on cars originating on its lines in Washington only), and by the Burlington (on cars originating on its lines in Colorado and Wyoming only).

Service Order No. 346, likewise effective

August 6 through October 20, unless otherwise provided, establishes restrictions on the icing and reicing of any freight cars loaded with carload shipments of fresh or green vegetables originating within the territory to which No. 345 applies, with the exception of the Texas panhandle. When such cars have been top iced or retop iced, bunker icing or reicing initially or in transit is prohibited under this order, except as to cars originating at points on the Burlington in Colorado or Wyoming. In general, this order limits to once the number of times such cars may be retop iced in transit at any point west of the Mississippi river (including Memphis, Tenn.) and east of the states of Idaho, Utah and Arizona. The amount of retop ice so used is limited to 8,000 lb.

Service Order No. 344, effective August 6 through September 25, prohibits the initial icing or reicing initially or in transit is with wine or juice grapes or potatoes originating at and moving wholly intrastate between points in Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington or Wyoming.

Service Order No. 343, effective August 6 through September 20, prohibits the initial icing or reicing in transit of any freight car loaded with watermelons or dried or evaporated fruit originating at any point in Montana, Wyoming, Colorado, New Mexico, or states west thereof.

The provisions of Service Order No. 330, as amended, restricting the preicing or precooling of refrigerator cars intended to be loaded with potatoes, have been made applicable to additional areas by a revised version of this order, effective August 6 through October 20, unless otherwise provided. This order prohibits the icing of such cars prior to completion of actual loading, or precooling (except with shippers' own precooling apparatus) of such cars for loading, with potatoes at points in the following states: Arizona, California, Colorado, Idaho, Kansas, Missouri, Montana, Nebraska, Nevada, New Mexico, Oregon, Texas, Utah, Washington and Wyoming. The order applies to both interstate and intrastate traffic.



U. S. Army Signal Corps Photos

Airplane Engines and Gasoline Drums Await Loading at a Railroad Platform in Southwestern China. Such Essentials Go Also by Mule Cart, Truck, and Air



Services of Supply Railroad Staff, at Kunming, China

(From left to right)—T/5 Waldo B. Watts, of Washington, D. C.; K. C. Hu, Kunming; Sgt. Lebowitch, Dobbs Ferry, N. Y.; B. Leung, Kunming; and T/5 Alvin Coffman, Jacksonville, Fla.

The provisions of Second Revised Service Order No. 243, limiting the light weighing of tank cars, have been modified by Amendment No. 1, effective August 8, to exempt from its restrictions, as to territory east of the Mississippi river, cars of the equipment register TP or TPI designations used to transport certain chemicals and compressed gases.

Amendment No. 9 to Service Order No. 68, superseding Amendment No. 8 and effective August 18 through January 30, 1946, continues the provisions of the superseded amendment with respect to assessing freight charges where part of the contents of an overloaded car are transferred to another car, with the additional requirement that the total of charges so determined shall not be less than the charges that would have applied if the excess had not been transferred to another car. As noted in *Railway Age* of July 14, page 77, the railroads have asked the commission to authorize retroactive application of the basis of charges prescribed in the amendment.

Service Order No. 348, effective from August 8 until August 12 unless otherwise provided, directs railroads to divert, over the most available alternative routes, cars routed via the Georgia & Florida because "a strike of certain operating employees . . . is interfering with operation of that carrier."

Service Order No. 350, effective from August 13 until November 13 unless otherwise provided, prohibits railroads from transporting cars loaded with live poultry more than 100 miles from any point of origin in the states of North Dakota, South Dakota, Nebraska, Kansas, Oklahoma,

Texas, Minnesota, Iowa, Missouri, Wisconsin, Illinois, and Indiana, "unless or until such carrier has knowledge . . . that a permit authorizing the shipment has been issued by the Secretary of Agriculture or his agent pursuant to the provisions of War Food Order No. 142." The latter was issued by the Secretary of Agriculture on July 31 to insure supplies of live poultry for the armed services; and the I. C. C. service order states that the director of the Office of Defense Transportation, having been advised by the Secretary of Agriculture of the "urgent needs of the armed services," requested the commission "to take such action as it deems appropriate and necessary."

Service Orders No. 120-H and No. 121-D, dated August 8, vacate service orders No. 120 and No. 121, which were issued in 1943 to implement orders issued by the Solid Fuels Administrator during that year's "work stoppages" in the coal mines. Service Order 120, which related to bituminous coal, had been suspended since November 6, 1943, while Service Order 121, relating to anthracite, had been suspended since June 4, 1943.

Materials and Prices

The following is a digest of orders and notices that have been issued by the War Production Board and the Office of Price Administration since August 1, and which are of interest to railroads:

Brake Shoes — A producer of railroad brake shoes on orders rated AA-1 may distribute his

available supply among his customers regardless of the sequence in which the rated orders were received, so as to obtain a fair and equitable distribution. Direction 10 to PR-1, provides for such distribution of railroad brake shoes notwithstanding the provisions of Section 944.7 of PR-1 until December 31, 1945. All orders rated AA-1 must be accorded preference over lower rated and unrated orders, the direction cautions.

Lead — A limited increase in the quantity of lead available for distribution under Order M-384, governing lead chemicals, has permitted a liberalization of quota restrictions affecting rubber compounding, gasoline refining and the production of red lead, white lead, decorative ceramics and decorative leaded glassware during the third quarter of this year. The quota on red lead for paints has been increased from 30 to 40 per cent, and the quota for the production of white lead for paints was raised from 8 to 12½ per cent. Since manufacturers are allowed to use during the third quarter the indicated percentage of base-period consumption (the first six months of 1944 representing the base period), actual quotas per quarter are approximately double the amount indicated in the order—thus the red lead quota is approximately 80 per cent per quarter and the white lead quota 25 per cent per quarter.

Sheet and Strip Steel — In line with its announced policy to encourage maximum production of critical sheet and strip steel, W. P. B. amended direction No. 71 to CMP regulation No. 1 to provide that the allocation of steel for conversion into carbon and electrical steel and strip may, where necessary, be made to cover the total order book pattern of the producer, including orders with the symbol Z-3 and unrated orders. It originally provided that allocations of conversion material would be made only to meet requirements of authorized controlled material orders carrying a symbol other than Z-3.

Prices

Copper Alloy Scrap — Sellers of non-ferrous scrap metals have been authorized to add a special-use premium of 1¼ cents per pound to base maximum prices for copper alloy scrap when the scrap is prepared to meet the specifications of certain qualified consumers and is sold suitable for their direct use without further preparation. In cases in which the special-use premium of 1¼ cents per pound is not great enough to permit the type of special preparation desired, the buyer-consumer of the material may ask O. P. A. to establish a special price that he may pay for the material.

Hardwood Plywood and Veneers — Wholesale and retail maximum prices for surplus hardwood plywood and veneers to be sold by R. F. C. for civilian use were announced by O. P. A. All sales under the action, are either at the distribution plant (wholesale) or retail level. A distribution plant reseller figures his price by adding actual freight cost paid by him to his purchase price from the government. To this figure he adds the same markups that are allowed in the hardwood plywood regulation. For sales at retail, the maximum price is the sum of the purchase price from the government and freight, plus 75 per cent. Order No. 74 under supplementary order No. 94 is effective immediately.

Steel Bars — An increase of \$2 per net ton in producers' base ceiling prices for cold finished carbon steel bars, with offsetting reductions of \$2 and \$6 per net ton respectively in the ceilings for two "extra" charges for certain annealing and testing operations performed on cold finished bars, became effective August 6.

The increase in ceiling prices combined with simultaneous reduction in the two extra charges represents the first compensatory price adjustment of its kind in the iron and steel field since the beginning of price control.

The price changes are as follows:

1. The ceiling base prices for cold finished carbon steel bars are increased 10 cents per 100 lb., (or \$2 per ton) for all types and qualities.
2. The extra for producing cold finished bars to United States Government specifications requiring physical testing is reduced to 15 cents per 100 lb. (or \$3 per net ton) from 25 cents per 100 lb. (or \$5 per net ton).
3. The stress and strain relieving extra for cold finished bars produced under Army and Navy specifications for use in manufacture of shells and other ammunition components is reduced to 45 cents per 100 lb. (or \$9 per net ton) from 75 cents per 100 lb. (or \$15 per net ton).



C. P. R. Photo

Canadian Servicemen in Station at Wolfe's Cove, Que.

Their sea voyage over, these army and air force repatriates are about to begin the long rail journey via the Canadian Pacific—some to homes as far west as Vancouver, B. C. Since January 1 of this year, the C. P. R. has carried 33,100 returning veterans in nearly 100 special troop trains. Food consumed on a recent Halifax to Winnipeg run is said to represent an "average" for a train carrying 300 men. Meals totaled 2,800, with the commissary supplying 2,100 lb. of meat, 1,000 lb. of poultry, 300 doz. eggs, 14 bags of potatoes, 365 loaves of bread, 100 lb. of butter and 110 gal. of milk.

GENERAL NEWS

Mead Stresses Need for Transport Study

Says it should be undertaken in the interest of all agencies

Senator Mead, Democrat of New York, is sponsoring his proposed Senate investigation of post-war transportation problems because he believes that such an inquiry should be made "in the interest of the railroads, the airlines, the bus lines, and the other systems of transportation, so that there will be a fair and equitable distribution of traffic." As noted in the *Railway Age* of August 4, page 224, the investigation, called for in Senate Resolution 168 introduced by Mr. Mead on August 1, would be made by a special Senate committee consisting of three members of the committee on commerce and three members of the committee on interstate commerce.

The resolution was referred to the committee on interstate commerce which had already reported favorably to the senate a resolution (S. Res. 161) under which it would be authorized and directed to make its own transportation investigation. Thus three resolutions calling for broad Congressional studies of transportation are pending, the third being House Resolution 318 under which the House committee on interstate and foreign commerce proposes to undertake its "national transportation inquiry." None of the resolutions had been acted upon when the Senate on August 1 joined the House, which had gone earlier, in an adjournment for a vacation period extending until October 8. Meanwhile, however, the House committee has gone ahead with the preliminary step of getting out a list of suggested topics for the consideration of interested parties (see *Railway Age* of August 4, page 223).

The Mead Resolution—Senator Mead's resolution specifies that the joint commerce-interstate commerce committee investigation should include consideration of: (1) Interrelationship among carriers by rail, water, highway, air, and pipe line; (2) the arrangement of transportation schedules so as to preserve the inherent advantages of each mode of transportation; (3) means of effectively utilizing new modes and improvements to existing modes of transportation developed during the war; (4) the effects of competition by foreign airlines upon domestic carriers; (5) the desirability of payment of government subsidies to carriers; and (6) taxation of carriers.

The committee would be directed to report to the Senate "at the earliest practicable date" the results of its study, "together

with its recommendations with respect to the development of a coordinated system of transportation in the United States." It would have the power of subpoena and would be authorized to employ a staff. Its expenses would be limited to \$10,000 to be paid from the contingent fund of the Senate.

Foresees "Revolutionary" Transport Changes—In the lengthy statement which he made in offering the resolution, Senator Mead asserted that the "revolutionary changes" in transportation brought about by the war "will have a terrific impact on our economy in the post-war period." He referred specifically to light-weight Diesel-powered railroad trains, modern airplanes, improved highway vehicles and water craft, visualizing in the latter connection the adaptation of the landing-craft idea to commercial water transportation. It seemed to him that information as to such developments "should be available to the committees which will appropriate huge sums of money for river and harbor improvements, for the construction of waterways and other similar improvements."

Explaining why he had proposed a special committee consisting of representatives of the commerce and interstate commerce committees, Senator Mead had this to say: "The reason for that provision in the resolution is that those two committees of the Senate have jurisdiction over matters pertaining to transportation. The interstate commerce committee has jurisdiction over railroads, highway transportation, and pipe lines. The commerce committee has jurisdiction over waterways and airways."

"It seems to me," he continued, "that this study should be initiated as quickly as possible . . . because this fall we shall be appropriating huge sums of money for improvements to our highways, our waterways, and our airways, and we ought to know just what the future equipment will be like, and all about it, before such appropriations are finally approved. . . ."

Subsidies and Taxation—"There has long been a controversy in which some have contended that certain modes of transportation are subsidized by the government, and certain other types of transportation are taxed by the government. The question of subsidies and taxation should be considered by this committee, and a report upon it could be made to the Senate. Everyone knows that transportation is one of the most vital and important elements in our economy."

Senator Mead supplemented his speech by inserting into the Congressional Record the following statements: "The Future of Our Waterways," by "an expert engineer and a designer of landing craft and small ocean-going cargo ships"; "Post-war Financing and Construction of Our Highways," by "a

(Continued on page 269)

Much Coal Displaced by Diesel Operations

Steam locomotives would have used 12.4 million tons to do the same 1944 job

Diesel-electric locomotives produced 1944 service units which would have required "something in excess of 12.4 million tons of coal" if the equivalent service had been performed by coal-burning steam locomotives, according to calculations included by the Interstate Commerce Commission's Bureau of Transport Economics and Statistics in the latest issue of its "Monthly Comment on Transportation Statistics." Figures for this year's first four months indicate that the Diesels are off to a 1945 performance for the duplication of which coal burners would require "roughly 18 million tons" of coal.

The figures show that, during 1944, Diesel-electrics on line-haul roads and switching and terminal companies performed 13,273,264 locomotive-hours of switching service, 356,174,584 car-miles of passenger service, and 59,665,296,000 gross ton-miles of freight service. On the basis of 0.412 tons of coal per locomotive-hour, the bureau calculates that coal-burning locomotives would have consumed 5,468,585 tons of coal in performing the switching service here involved. The passenger service would have required 2,991,867 tons on basis of 0.0084 tons per car-mile; and the freight service would have required 4,015,474 tons on the basis of 0.0673 tons per 1,000 gross ton-miles.

Big '44 Diesel Increase—During the first four months of this year, the Diesel-electrics have performed 2,156,379 locomotive-hours of yard service, an increase of 23.3 per cent above the comparable 1944 period; 1,087,902 car-miles of passenger service, an increase of 5.3 per cent; and 2,226,421,000 gross ton-miles of freight service, an increase of 128.9 per cent. The bureau's estimate that coal burners would consume "roughly 18 million tons" of coal in duplicating the expected 1945 performance of the Diesels is based on the assumption that the percentage increases over the 1944 Diesel service units, shown by the foregoing figures for the first four months, "do not rise further, as they may, but only maintain those relationships throughout the year."

"In the first four months of 1945," the comment went on, "the Class I line-haul and switching and terminal railways consumed 41,271,929 tons of coal as locomotive fuel. The coal consumption to produce the equivalent Diesel-electric service units by coal-burning locomotives in the same period was 5.47 million tons. The

latter figure is 13.3 per cent of the total coal consumed and 11.7 per cent of the theoretical consumption of 46,742,631 tons had the Diesel-electric service units been produced by coal-burning locomotives against the average rate of consumption." The 12.4 million tons "displaced" in 1944 was equivalent to about 10 per cent of the 123,676,000 tons of coal consumed by locomotives in that year.

Coal Costs Mount—"Without intending to imply that there is a connection between the two sets of figures," the bureau had introduced its discussion of the service performed by Diesels by calling attention to the fact that "the sharp increase, both absolute and relative, in Diesel motive power during the last five years has coincided with more or less correspondingly abrupt increases in the cost of locomotive coal." A tabulation in this connection shows that the average cost of coal consumed by Class I line-haul roads as locomotive fuel increased from \$2.45 in 1940 to \$3.33 in 1944. During the same period the number of Diesels in service on those roads increased from 797 to 3,022, the former figure being 1.91 per cent and the latter 6.93 per cent of the total locomotives in service during the respective years. The number of steam locomotives dropped from 40,041 in 1940 to 39,681 in 1944, a decline which seemed "particularly significant" to the bureau.

"Coal costs," it continued, "rose 88 cents per ton or over 35 per cent in the same

period and this figure does not reflect the increase in coal prices effective in May of this year.

Traffic Importance of Coal—"Bituminous coal is one of the most important single items of railway traffic in terms of both tonnage and revenue. In 1943 the Class I line-haul railways carried 774 million tons of bituminous coal (including duplications resulting from interline traffic), the revenue from which aggregated \$906 million. In terms of traffic this commodity accounted for roughly one-quarter of the total of three billion-odd tons of freight carried and for slightly more than one-eighth of the Class I carriers' gross freight revenues of \$7.1 billion.

"Quantitatively, the Class I railways as a group are also one of the most important consumers and purchasers of coal, particularly for use as locomotive fuel. In 1944 the Class I railways, including switching and terminal companies, of the United States consumed 123,676,000 tons of coal as locomotive fuel, a figure which is equivalent to 20.94 per cent of the total bituminous consumption of 590,694,000 tons in 1944 and 19.02 per cent of both the anthracite and bituminous consumption of 650,094,000 in the same year. These total consumption figures exclude both bunker and export coal. The consumption of anthracite as locomotive fuel is relatively small."

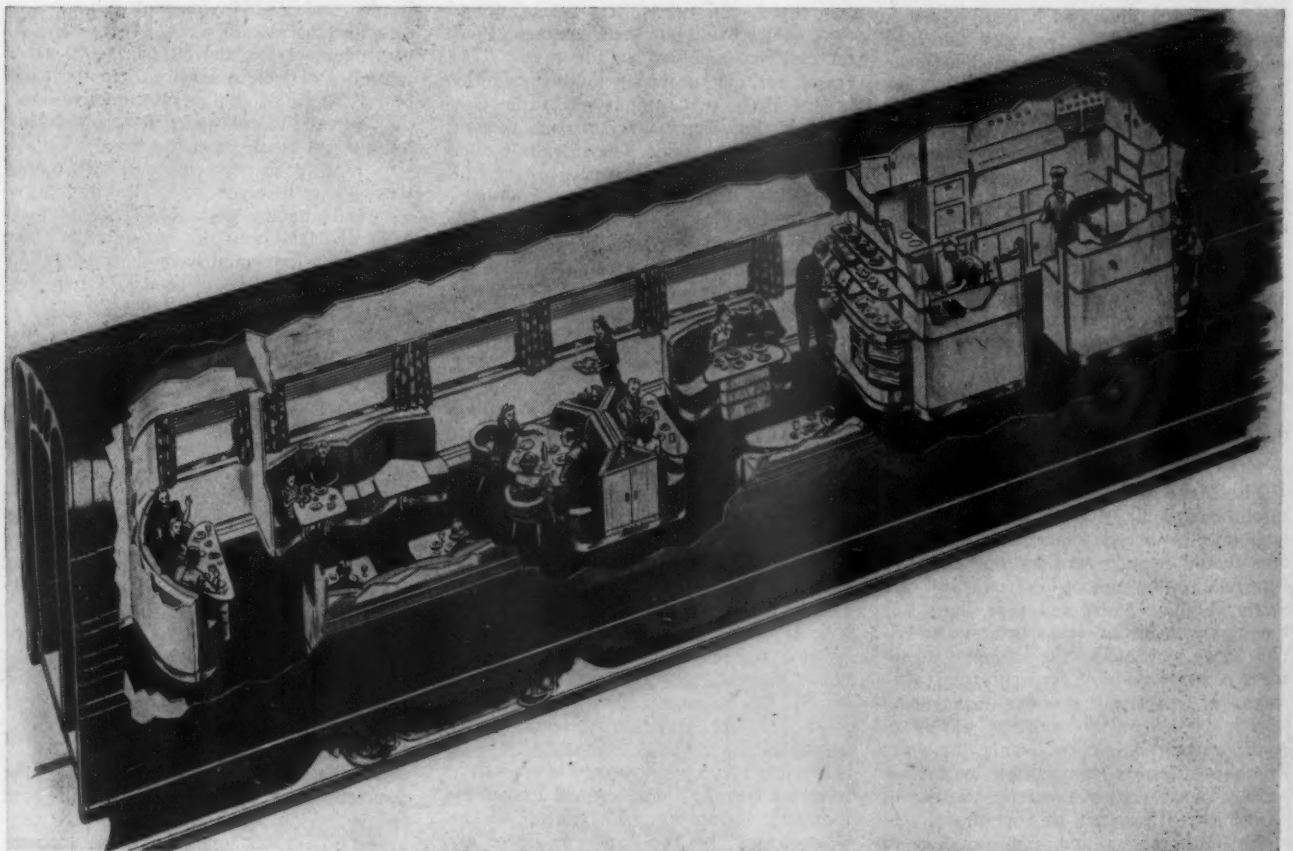
Occupancy Ratio of Passenger Cars—Meanwhile first place in the comment

had been given to the bureau's discussion of passenger car use. Attention is there called to the "intensive use of passenger cars" in the war years as shown by "large increases in the number of passengers occupying the cars in comparison with the average for the year 1939." The average occupancy of coaches increased from 17 passengers in 1939 to 41.6 in 1944, a rise of 145 per cent.

The latter figure is a composite of district percentage increases ranging from 87 per cent in the East to 239 per cent in the West.

The average occupancy of sleeping and parlor cars rose from 9.3 passengers in 1939 to 20 passengers in 1944, an increase of 120 per cent. By districts, the increase was 102 per cent in the East, 116 per cent in the West, and 157 per cent in the South.

More recent figures show, as the bureau puts it, that "since June-August, 1944, the number of passengers per car in every month and in each district has averaged roughly two to five less than the average in those months." A portion of this decrease is attributed by the bureau to seasonal influences. It then adds: "Whether or not with present restrictions on civilian travel, the redeployment movement of troops will carry the average passengers per car above the peak month averages reached in 1943 and 1944, it is impossible to do more than guess at the present time. The presumption would seem to be in the affirmative, although there is some possi-



A New Grillroom Car, Designed by the Pullman-Standard Car Manufacturing Co., Offers Either Complete Meals or Quick Lunch Service. Passengers May Serve Themselves from One of Two Food Bars on Either Side of the Kitchen. Accommodations on Right Half of Car (Not Shown) Are the Same as Those Shown at Left

bility that it will not do so, at least in all three districts simultaneously."

3 Men to a Section—Other figures on the degree of utilization of passenger-carrying cars show that the average occupancy of coaches in 1944 was 57.6 per cent of seating capacity as compared with 23.5 per cent in 1939. The occupancy of sleeping and parlor cars was 78 per cent in 1944 as compared with 35.5 per cent in 1939. The Southern district reported an 85 per cent occupancy of sleeping and parlor cars in 1944. In connection with figures on the percentage occupancy of sleeping cars, it is pointed out that the Army normally assigns two men to a lower berth, and thus occupancy for a troop movement can be "as high as 150 per cent of capacity." For the first four months of this year the average occupancy of coaches was 52.7 per cent, while like figures for sleeping and parlor cars was 75.3 per cent.

The comment's regular monthly review of railroad operating results showed that the freight revenue of the Class I roads in June, on a daily basis, was 0.8 per cent above May and 4.4 per cent above June, 1944. The freight revenue index (based on the 1935-39 monthly average as 100) was 235.2, up 1.9 per cent from May's 233.3 and 1.2 per cent below April's 236.4 which was the highest since December, 1943.

June passenger revenues, on a daily basis, were up 13.2 per cent from May, but 4.6 per cent below June, 1944. The June passenger revenue index at 449 marked "a return to approximately the level of September, 1944, and July, 1943." It was higher than that of any previous 1945 month, being 52.3 points above May's index of 396.7.

Fixed Charges Fall—Data on changes in fixed charges and income available therefor show that for the five months ended with May the fixed charges declined 5.1 per cent as compared with the same 1944 period while income available for them was declining 1.7 per cent. Thus fixed charges were earned 2.23 times in the 1945 period as compared with 2.15 in 1944. Income available for fixed charges in the first five months of this year was 107 per cent greater than the comparable figure for the first five months of 1940; fixed charges were 9.8 per cent lower.

Data on freight service revenue and expenses show that the average freight service revenue per 1,000 gross ton-miles increased from \$3.75 in 1940 to \$4.32 in 1944, a rise of 15.2 per cent. At the same time freight service operating expenses per 1,000 gross ton-miles increased 21.2 per cent, from \$2.36 in 1940 to \$2.86 in 1944. It is noted that the increase in expenses "aside from expenses for depreciation and for amortization of defense projects" is "somewhat lower"—18.2 per cent. As compared with the previous year, the 1944 revenue per 1,000 gross ton-miles was up 0.9 per cent, while the expenses were up 8.3 per cent. The latter becomes 7.9 per cent on the basis of expenses less depreciation and amortization.

The bureau's traffic forecast for the present month indicates that carloadings will be 1.2 per cent below the August, 1944, level. This net figure results from an estimated decrease of 1.7 per cent in car-

"Copping Locos" a Favorite Sport in Britain

Waterloo station, London, for some time has been a popular spot for British boys and girls to pursue the current vogue of collecting engine numbers, or "copping locos," as they prefer to call it.

This pastime, the British press reveals, has been going on for nearly two years, with enthusiasts thumbing through "The Spotters' ABC of Locomotives," or recording their findings in pocket notebooks. When a train pulls in with a locomotive not previously recorded, the "spotter" makes note of it. One "regular" in London has "collected" 350 steam and 600 electric locomotives, while another has recorded 2500 steam locomotives.

Occasionally, their enthusiasm has led spotters to points along the right-of-way. Awaiting trains, the youths resort to the time-honored practice of placing pennies on the rails, which they retain as souvenirs. Such trespassing has necessitated the restraining hand of the police. But more often, "copping locos" is an orderly sport, with the school teachers forming spotters' clubs and making organized trips to railway junctions.

The aforementioned spotters' manual was written by Ian Allan, of the Southern Railway's advertising office. To date, more than 200,000 copies have been sold.

load loadings and a 2.5 per cent increase in l. c. l. loadings. Carload loadings for this year's second half are now estimated at 19,116,776 cars, a decrease of 300,300 cars or 1.5 per cent below the comparable 1944 total.

Would Give I. C. C. Power Over Lighting of Cabooses

Senator Wheeler, Democrat of Montana, has introduced S. 1344 "to amend section 25(b) of the Interstate Commerce Act so as to authorize the Interstate Commerce Commission to require the adequate lighting of cabooses."

I. C. C. Reopens Case Involving Accounting for Post Driving

Reopening its No. 29140 investigation involving accounting for the cost of driving posts into the roadbed at the ends of ties to arrest water pockets, the Interstate Commerce Commission has broadened the proceedings to make respondents of all Class I roads. It has further broadened the scope of the inquiry to include the question of whether expenditures for pressure grouting to promote the stability of roadbeds shall be charged to operating expense account No. 202, Roadway Maintenance, or investment account No. 3, Grading.

As noted in the *Railway Age* of April 7, page 638, Division 1's prior report, which described this proceeding as one involving "the fundamental distinction in accounting between capital expenditures and oper-

ating costs," found that the cost of the post driving was a capital investment, chargeable to account No. 3 Grading. Only the cost of removing the ballast and resurfacing was found chargeable to operating expenses. At that time the respondents were the Texas & Pacific, Texas & New Orleans, and Louisiana & Arkansas; and they contended that the entire cost of the post driving should be charged to operating expenses. The present reopening of order postpones Division 1's order indefinitely.

Emergency Board Appointed

Chairman H. H. Schwartz of the National Railway Labor Panel has appointed an emergency board to investigate a wage dispute between the Canadian Pacific and certain of its employees represented by the four train-service brotherhoods, the Brotherhood of Railway Clerks, the Brotherhood of Maintenance of Way Employees, and the Railway Employees Department, American Federation of Labor. The board was scheduled to begin hearings at Portland, Me., on August 13.

Western Roads Assign Trains to Exclusive Military Use

Several western railways have recently revised their passenger operations to provide additional accommodations for the handling of military and naval personnel. The Southern Pacific has established a daily train between Tucumcari, N. Mex., and Los Angeles, Cal., for this purpose. This train handles civilian passengers in coaches only between regular stops and carries a dining car. Other cars in the train are for military personnel only. Westward, the train, No. 371, departs from Tucumcari at 2:20 a. m., arriving at Los Angeles at 1:30 p. m. the second day. Eastward No. 370 leaves Los Angeles at 5:25 p. m., an hour ahead of the Golden State Limited, and arrives at Tucumcari at 7:00 a. m. the second morning, thirty minutes ahead of the Golden State. Because the Rock Island operates two lines east from Tucumcari, one to Chicago and the other to Memphis, Tenn., no regular connection for this train is scheduled over Rock Island rails, passengers for points on those lines being normally handled on regular trains. These trains make conditional stops at Beaumont, Cal., and Banning to detain Navy personnel.

Another Southern Pacific military train is operated daily between Los Angeles, Cal., and Oakland, via the Coast line. This train, which is shown in the public timetables as a military extra, has a regular consist of three troop sleepers and diner. Southward, it is scheduled to leave Oakland pier at 4:00 p. m., arriving at Los Angeles at 7:30 a. m. the following day. Northward the train leaves Los Angeles at 7:00 p. m., with a 10:20 a. m. arrival at Oakland.

A third S. P. train which is assigned to military personnel is the regular eastward second section of the San Francisco Overland Limited. This train is operated through from San Francisco, Cal., to Chicago via the S. P., U. P., and C. & N. W. It carries coaches and dining car and is assigned to military personnel traveling on furlough and their families. Ordinary

civilian passengers are not permitted to board this train.

In the Chicago area, the Burlington and the Milwaukee are each operating daily furlough specials between Camp Grant, Ill. (near Rockford), and Chicago, about 90 miles in each direction. Camp Grant is one of the largest distribution and assembly centers for troops being returned from the European Theater of Operations. Thousands of men passing through this camp daily, en route home on furlough following European duty or returning after furlough to receive new assignments.

In addition, nearly all of the Pacific Coast trains operating out of Chicago are operating in two or more sections daily. Among those which are now scheduled for daily operations in sections are the Los Angeles and San Francisco Challengers of the C. & N. W.-U. P.-S. P., the Californian of the R. I.-S. P., the Olympian of the Milwaukee, the Empire Builder of the C. B. & Q.-G. N., and the North Coast Limited of the C. B. & Q.-N. P.

On a somewhat smaller scale, the Frisco has assigned a ten-section, drawing room, two-compartment sleeping car to exclusive military occupancy between Kansas City, Mo., and Jacksonville, Fla. This car operates on the Kansas City-Florida Special of the Frisco and Southern Railway daily in each direction.

Rock Island Puts on New Train

A new, fast passenger train, to be known as the "Des Moines Limited," to run between Chicago and Des Moines, Iowa, was placed in operation by the Chicago, Rock Island & Pacific on August 5. The new train is made up of existing equipment including air-conditioned coaches, parlor

and dining cars. It leaves Chicago at 9:40 a.m., arriving at Des Moines at 6:10 p.m.

At the same time the Rock Island announced a change in schedule of the "Southwest Express" which operates between Chicago, Kansas City, Mo., and Dalhart, Tex. This train will leave Chicago at 9:40 a.m., one half-hour later than the previous departure time, and will operate as a consolidation with the Des Moines Limited between Chicago and Rock Island, Ill.

I. C. C. Favors New Transport of Explosives Act

The Interstate Commerce Commission recommends passage of S. 1290, the proposed new Transportation of Explosives Act, which Chairman Wheeler of the Senate committee on interstate commerce introduced "by request" on July 21. As noted in the *Railway Age* of July 28, page 180, where the introduction of the bill was reported, the commission recommended such legislation in its 1943 and 1944 annual reports.

The commission's endorsement of S. 1290 came in an August 3 letter which Commissioner Splawn, chairman of the legislative committee, wrote to Senator Wheeler. The letter cited the "large increase in the volume of explosives and other dangerous articles carried by transportation agencies in the past five years," and recalled the commission's annual-report recommendations in favor of rewriting the act "in the light of important developments relating to this subject which have occurred in the 23 years which have elapsed since the last revision."

"S. 1290," Commissioner Splawn con-

tinued, "would accomplish this result. This bill is considerably broader in its scope than the present act. It embraces all carriers engaged in interstate or foreign commerce, including common, contract, and private carriers. It covers all forms of transportation by land, water, and air. This is desirable in order that there may be a single regulatory body to which any carrier may look for rules relating to transportation of this kind. There will undoubtedly be a large increase in the near future in air traffic and the interchange of shipments between air and land or water carriers. Under these circumstances both shippers and carriers will benefit from having a single set of uniform rules to follow and a single regulatory agency to look to for guidance.

"S. 1290 would enlarge the powers of this commission in time of war, threatened war, or other national emergency by subjecting intrastate carriers of all kinds, common, contract, and private to the regulations of the commission concerning the transportation of dangerous articles. The bill would greatly strengthen administrative and enforcement powers of the commission by giving it powers, rights, and duties similar to those embodied in the Interstate Commerce Act, including a provision for enforcement of the commission's regulations by the courts through injunctive relief at the suit of the commission itself or of the attorney general."

A. S. M. E. Announces 1945-46 Nominees

D. Robert Yarnall, president of the Yarnall-Waring Company, Philadelphia, Pa., has been nominated by the national nominating committee of the American Society of Mechanical Engineers for the office of president of the society for the year 1945-46.

Regional vice-presidents named by the committee to serve two-year terms on the society's council are A. R. Stevenson, Jr., staff assistant to the vice-president, General Electric Company, Schenectady, N. Y.; Samuel R. Beitler, professor hydraulic engineering, Ohio State University, Columbus, Ohio, and J. Calvin Brown, attorney-at-law and mechanical engineer, Los Angeles, Calif. Nominated regional vice-presidents for one-year terms are Rudolph F. Gagg, assistant to general manager, Wright Aeronautical Corporation, Paterson, N. J.; Edward E. Williams, general superintendent of steam plants, Duke Power Company, Charlotte, N. C., and Linn Helander, professor of mechanical engineering and head of the department of mechanical engineering, Kansas State College, Manhattan, Kans. Directors-at-large nominated to serve four-year terms on the council are Edgar J. Kates, consulting engineer, New York, and J. Noble Landis, assistant mechanical engineer, Consolidated Edison Company of New York, New York.

To be continued in office for the remainder of their terms are Alton C. Chick, assistant vice-president and engineer, Manufacturers Mutual Fire Insurance Company, Providence, R. I., and Thomas S. McEwan, regional director, War Production Board, Seventh Federal Reserve District, Chicago. Messrs. Chick and McEwan have



Port Moody Station "Goes to Town"

Literally "going to town," the station at Port Moody, British Columbia, on the Canadian Pacific, was moved recently one-half mile nearer the center of town in the relatively short time of seven hours. The 75-ton, two-story frame structure, resting on long timbers straddling the two tracks, was skidded along greased rails by a yard engine traveling at a speed of two miles an hour, and was reset on a new concrete foundation, without disturbing a single piece of furniture in the building.

been redesignated regional vice-presidents. Also continuing on the council to serve two-year terms as directors-at-large are Daniel S. Ellis, vice-president in charge of manufacture, Lima Locomotive Works, Lima, Ohio, and Arthur J. Kerr, general sales manager, Pittsburgh Equitable Meter Company and Merco Nordstrom Valve Company, Tulsa, Okla. John E. Lovely, vice-president and chief engineer, Jones & Lamson Machine Co., Springfield, Vt.; David Larkin, vice-president and general manager, Broderick & Bascom Rope Co., St. Louis, Mo.; Samuel H. Graff, director of the Engineering Experiment Station, Oregon State College, Corvallis, Ore., and James M. Robert, dean, College of Engineering, Tulane University, New Orleans, La., continue on the council as directors-at-large for one-year terms.

Under a recent change in the constitution of the society the council is now organized to provide for eight regional vice-presidents to be elected for two-year terms and eight directors-at-large to be elected for four years. Each vice-president will be the leader in his region and will be the representative of that region on the council. He will be responsible for the successful functioning of the sections and branches in his area and for the administration of national programs that affect the regions. The directors-at-large will be chosen from among outstanding men in engineering regardless of residence.

Deal Open for Sale of Mexican Road Owned by British

The government of Mexico has opened negotiations for the purchase of the British-owned Mexican Railway Company, operators of a railroad running between Mexico City and Vera Cruz. Although no official statement has been issued as yet it was reliably reported that the company is asking 45,000,000 pesos (about \$9,000,000), with the Mexican government offering 40,000,000 pesos. Officers of the railroad refused to confirm or deny reports published in Mexico City newspapers that certain American interests had offered 55,000,000 pesos for the railroad.

Nine B. I. R. Reports Will Be Printed by Senate

Nine of the 13 reports which the defunct Board of Investigation and Research submitted to Congress late on the afternoon of its last day in office, September 18, 1944, will be printed as Senate documents at an estimated cost of \$30,414.89. Senator Stewart, Democrat of Tennessee, got the unanimous-consent agreement for the printing at the Senate's final pre-vacation session on August 1 after he had completed his uniform-freight-rates speech which was reported in last week's issue.

The reports listed by Mr. Stewart and the estimated cost of printing each are as follows:

1. Technological Trends in Transportation, 192 pages, \$1,287.83.
2. Railroad Consolidation and Employee Welfare, 52 pages, \$468.68.
3. Federal Regulatory Restrictions upon Motor and Water Carriers, 356 pages, \$3,282.27.
4. Relative Economy and Fitness of the Carriers, 48 pages, \$327.39.
5. The Economics of Iron and Steel Transportation, 296 pages, 6 pasters, \$3,282.53.
6. Interstate Trade Barriers Affecting Motor Transportation, 96 pages, \$2,403.20.

7. The Economics of Coal Traffic Flow, 100 pages, 12 pasters, \$1,658.81.

8. National Traffic Pattern, 192 pages, 12 pasters, \$2,366.33.

9. Comparisons of Rail, Motor and Water Carrier Costs, 728 pages, 2 pasters, \$15,337.85.

When the B. I. R. reports were submitted, only one of them was printed immediately by Congress. It is the report on Practices and Procedures of Governmental Control of Transportation, which was reproduced in House Document 678 of the seventy-eighth Congress. Two other reports on Public Aids to Domestic Transportation and Carrier Taxation are now in the process of being printed, also as House documents, the House having so ordered last April when it adopted resolutions sponsored by Chairman Lea of the committee on interstate and foreign commerce.

While making his speech, Senator Stewart was interrupted by Senator Johnston, Democrat of South Carolina and a former governor of that state, who wanted it "clearly understood that all credit [for the Interstate Commerce Commission's class rate and classification decision] should be given to the Southern Governors' Conference and not to any one individual for bringing a suit." The latter is a reference to the pending case wherein Governor Arnall of Georgia, with the support of the Department of Justice, is seeking a Supreme Court order enjoining the railroads from "conspiring" to fix freight rates in alleged violation of the federal anti-trust laws.

"That matter," Senator Johnston continued, "was not taken up with the southern governors at their conference, and the suit was brought without the sanction of the southern governors. What result we have achieved in the past has been brought about through the Interstate Commerce Commission. The suit was brought by the governor of Georgia. The southern governors feared that it might hurt our case with the Interstate Commerce Commission, but I am glad to say that the Interstate Commerce Com-

mission was big enough to overlook the fact that suit was brought in the courts while another case was pending before the commission."

While he was on his feet, Senator Johnston obtained unanimous consent to have printed in the Congressional Record a speech entitled "The Truth About the Freight-Rate Matter," which he made before the Western Governors' Conference at Denver, Colo., September 18, 1943, when he was governor of South Carolina. Senator Stewart expressed agreement with his colleague's view that, as the Tennessean paraphrased it, "the correct route of travel is through the Interstate Commerce Commission which was established a great many years ago, and throughout the years has had control of the freight-rate situation as a rate-making body."

At the same time, however, as reported in last week's issue, Senator Stewart revealed plans which would keep the rate-uniformity issue in the political arena; for he said elsewhere in his speech that he will sponsor an investigation of contentions to the effect that the I. C. C.'s decision in Nos. 28300 and 28310 will not afford much relief to complaining sections because the class rate structure, to which the decision is confined, has become too "obsolete and unworkable" to accommodate any great amount of traffic.

The speech further indicated that contentions which Mr. Stewart has heard along the foregoing lines are mainly those of C. E. Childe, former member of B. I. R. The proposed investigation would be conducted by the Senate small business committee's transportation subcommittee of which Mr. Stewart is chairman. Mr. Childe is now associated with this committee as a transportation consultant.

At the close of his speech Senator Stewart had inserted in the Congressional Record the text of the McGraw-Hill Publishing Company's recent newspaper advertise-



C. P. R. Photo

Canada's First Aluminum-Sheathed Box Car

Weighing 4,200 lb. less than a steel-sheathed car of similar capacity, the box car shown was built by the Canadian Pacific at its Angus shops, in Montreal. Sides, doors, roof, running board, brake step and hand-brake housing are of aluminum. Two more such cars were built for the C. P. R. by the Canadian Car & Foundry Co., Ltd.

ment entitled "Freight Rates and Industrial Location." He called the advertisement's comment on the I. C. C. decision "the most sensible analysis that I have ever read on any subject," directing particular attention to the concluding paragraph which follows:

"This decision will neither destroy the economy of the industrial East, nor will it, overnight, assure the industrial flowering of the South and West. It constitutes one sound step toward establishing that equality of opportunity for all sections of the country which is essential to a nation that bears the proud title of the United States."

1st Quarter Loading Estimates Missed by 2.8 Per Cent

Regional Shippers Advisory Boards overestimated carloadings for this year's first quarter by 2.8 per cent over-all, according to the latest comparison of the forecasts with actual loadings, which has been issued by W. C. Kendall, chairman of the Car Service Division, Association of American Railroads. The variations by individual boards ranged from an overestimate of 11.2 per cent to an underestimate of 4.9 per cent, while the variations by commodities ranged from an overestimate of 17.5 per cent to an underestimate of 37.6 per cent.

The net result, showing the 2.8 per cent overestimate, compares with an underestimate of 6.1 per cent for the same quarter last year. For 1944's second quarter there was an underestimate of 2 per cent, while the scores for last year's third and fourth quarters, respectively, were overestimates of 0.2 per cent and 3.7 per cent.

Comparisons for the 13 regional boards are shown in the accompanying table. Another tabulation by commodities showed that the 37.6 per cent underestimate, noted above, was on loadings of hay, straw, and alfalfa, and the 17.5 per cent overestimate was on loadings of grain. No other overestimates by commodities amounted to as much as 10 per cent, but other underestimates included the following: Cottonseed and products, except oil, 19 per cent; "other fresh fruits," 18.9 per cent; brick and clay products, 17.2 per cent; cement, 10.4 per cent.

Comparison National Forecast with Actual Loadings—First Quarter 1945

Board	Carloadings First Quarter 1945		P. C. of Accuracy	
	Estimated	Actual	Over Estimated	Under Estimated
Allegheny	1,101,039	1,022,005	7.2	..
Atlantic States	646,634	574,378	11.2	..
Cent. Western	277,200	277,129	..	.03
Great Lakes	282,400	293,905	..	4.1
Midwest	868,921	870,781	..	0.2
New England	105,493	107,668	..	2.1
Northwest	273,967	243,947	11.0	..
Ohio Valley	973,844	922,274	5.3	..
Pacific Coast	257,998	250,553	2.9	..
Pacific	233,828	225,312	3.7	..
Southwest	796,530	817,950	..	2.7
Trans-Mo-Kan	330,974	330,410	0.2	..
Total All Boards	6,667,026	6,480,054	2.8	..

Beyer Made Advisor to W. S. A. and Maritime Commission

Otto S. Beyer, former director of the Division of Transport Personnel, Office of Defense Transportation, has been appointed labor relations advisor to the United States Maritime Commission and War Shipping

Administration. A joint August 3 announcement from the two agencies said that he would serve as consultant "on matters dealing with labor and manpower."

Since leaving O. D. T., where he served from February, 1943, until June, 1944, Mr. Beyer has served various agencies as consultant on labor, personnel, and training. Before joining O. D. T. he had been a member of the National Mediation Board since November, 1935.

Freight Car Loading

Loadings of revenue freight for the week ended August 4 totaled 863,910 cars, the Association of American Railroads announced on August 9. This was a decrease of 22,361 cars or 2.5 per cent below the preceding week, a decrease of 25,684 cars or 2.9 per cent below the corresponding week last year, and a decrease of 8,223 cars or 0.9 per cent below the comparable 1943 week.

Loading of revenue freight for the week ended July 28 totaled 886,271 cars, and the summary for that week, as compiled by the Car Service Division, A. A. R., follows:

Revenue Freight Car Loading

For the Week Ended Saturday, July 28			
District	1945	1944	1943
Eastern	164,421	165,610	169,806
Allegheny	197,214	200,279	197,436
Pocahontas	54,777	56,859	56,916
Southern	122,471	124,154	119,325
Northwestern	131,315	141,705	141,843
Central Western	142,392	144,018	131,821
Southwestern	73,681	76,865	68,378
Total Western Districts	347,388	362,588	342,042
Total All Roads	886,271	909,490	885,525
Commodities			
Grain and grain products	67,849	57,408	58,553
Live stock	14,353	14,878	14,270
Coal	173,075	179,539	178,134
Coke	14,316	14,830	14,937
Forest products	46,213	53,112	48,182
Ore	76,258	85,173	86,704
Merchandise l.e.l.	103,507	103,845	98,706
Miscellaneous	390,700	400,705	386,039
July 28	886,271	909,490	885,525
July 21	882,323	902,092	883,838
July 14	883,268	903,901	877,335
July 7	726,404	744,347	808,630
June 30	893,741	897,210	852,082
Cumulative Total, 30 Weeks	24,640,211	24,745,031	23,786,705

In Canada.—Carloadings for the week ended July 28 totaled 73,442 as compared with 71,810 for the previous week and 71,268 for the corresponding period last year, according to the compilation of the Dominion Bureau of Statistics.

	Total Cars Loaded	Total Cars Rec'd from Connections
Totals in Canada:		
July 28, 1945	73,442	34,634
July 29, 1944	71,268	27,509
Cumulative Totals in Canada:		
July 28, 1945	2,053,286	1,100,592
July 29, 1944	2,081,073	1,160,649

Representation of Employees

Reporting on results of a recent election whereby the National Council of Railway Patrolmen's Unions, American Federation of Labor, undertook to get itself recognized as the collective-bargaining agent of patrolmen (including lieutenants and watchmen) in the Wabash's special service department, the National Mediation Board found itself unable to make a certification "for the reason that less than a majority of those eligible to vote cast legal ballots."

There were 63 employees eligible to vote, and only 29 ballots were cast—28 for the Council and one void. The employees involved were not represented by any organization or individual when the Council's application for the election was filed with N. M. B.

In another recent election on the Houston Belt & Terminal, the Brotherhood of Locomotive Engineers defeated the challenging Brotherhood of Locomotive Firemen & Enginemen, thereby retaining its right to represent that road's firemen, hostlers and hostler helpers. The vote was: B. of L. E., 44; B. of L. F. & E., 37.

Pere Marquette Trains Coast Guardsmen

The Pere Marquette has been awarded a citation and a certificate of appreciation, both signed by Admiral R. R. Waesche, Commandant of the United States Coast Guard, for its outstanding service to the nation in assisting in the training of over 3,000 Coast Guardsmen. The award was announced in a letter to Pere Marquette President R. J. Bowman, from Commander E. T. Calahan of the Coast Guard's Chief Training division. Commander Calahan's letter concluded by saying: "This program (the personnel training program) could not have been carried on without your cooperation."

The training schedule was carried out during the period November, 1943, to November, 1944, on board the railroad's Lake Michigan car ferry fleet and at shore classrooms. During this time all P. M. ship's officers were commissioned in the Coast Guard and wore the blue Coast Guard uniform. Superintendent of Steamships L. H. Kent became, for the period, Commander L. H. Kent.

The first Coast Guardsmen's class consisted of 100 men. They were assigned to six vessels in groups of fourteen men, nine of whom were given engine-room duties, three placed on deck work, and two assigned as apprentice cooks. The trainees stood the same watches, four hours on duty and eight off, as did regular crew members.

Illinois Central to Build New Type Refrigerator Car

A lightweight type of refrigerator car which, by the use of collapsible bulkheads, can be transformed into a box car in a matter of minutes, will be built and tested by the Illinois Central within a short time.

One of the special features of the new car is the fact that when completed it will weigh approximately 14,000 lb. less than the standard refrigerator car of today. It will be constructed of aluminum alloys for lightness and will be completely insulated with Fiberglas. It will be equipped with built-in fans for an effective cooling circulation of air from the floor through the ice-boxes to the ceiling, plus air-ducts for protective cooling of side-walls and better distribution of air over and around the load. Collapsible ice-boxes will fold back as reinforcements for the ends of the car when used for other purposes.

The trucks will be designed for smoothness in riding, using longer springs and

built-in stabilizers in the truck bolsters. To prevent damage from horizontal shocks, the Duryea cushion underframe will be used.

The floor racks of the new car will be of aluminum instead of wood for greater cleanliness, sanitation and non-retention of odors in handling foodstuffs. Synthetic rubber will be used in place of felt to seal the ice-loading hatches. The collapsibility of the bulkhead ice-compartments will add some six feet to the inside loading length of the car when in ordinary merchandise service. The total inside length at that time will be about 39 ft. The fans also will assist in directing the air circulation when the car is in use with heaters to handle freight that requires protection against cold. There will be a double thermometer on the outside of the car that will show the inside temperature at top and bottom. The car will be equipped with steel wheels and hollow axles.

The car will be built in the Illinois Central shops at McComb, Ill., and is expected to be ready for testing about October 1. Construction will be based on plans perfected by the refrigerator car committee of the United Fresh Fruit & Vegetable Association. Collaborating in the arrangements for building and testing the car are the Aluminum Company of America and the Car Construction Committee of the Association of American Railroads.

Senators' Parting Shots

Before getting away on August 1 for their two-months vacation, various senators, including Majority Leader Barkley, made speeches embodying reference to the transportation situation or pending legislation in which the railroads are interested.

Summing up the legislative situation, Mr. Barkley called for favorable action after the recess on proposed legislation to give President Truman the authority he wants to reorganize government agencies. Senator McCarran, Democrat of Nevada, is sponsor of a bill (S. 1120) which would give the President practically all he is asking in that connection; but the House bill (H.R. 3325, introduced by Representative Manasco, Democrat of Alabama) would exempt 21 agencies, including the Interstate Commerce Commission, National Mediation Board, National Railroad Adjustment Board, and Railroad Retirement Board.

The Railway Labor Executives Association, at a meeting in Washington last week, went on record against the McCarran bill "insofar as it would permit a consolidation of such rail labor agencies as the National Mediation Board and National Railroad Adjustment Board," according to the August 4 issue of "Labor." The account of the meeting said that the new Secretary of Labor, Lewis B. Schwellenbach, dropped around to "get acquainted"; and he "lauded the functioning of the Railway Labor Act and riddled published rumors that in his plans to centralize labor activities in his department he was considering taking in also those agencies which deal with railroad labor."

In other parts of his pre-recess speech, Senator Barkley listed the St. Lawrence

Selected Income and Balance-Sheet Items of Class I Steam Railways

Compiled from 132 reports (Form IBS) representing 136 steam railways
(Switching and Terminal Companies Not Included)

	All Class I Railways			
	For the month of May		For the five months of	
	1945	1944	1945	1944
Income Items				
1. Net railway operating income	\$99,925,990	\$99,175,352	\$439,677,035	\$452,908,092
2. Other income	15,181,802	14,083,220	71,502,713	69,977,590
3. Total income	115,107,792	113,258,572	511,179,748	522,885,682
4. Miscellaneous deductions from income	2,616,480	3,131,559	12,664,857	15,684,927
5. Income available for fixed charges	112,491,312	110,127,013	498,514,891	507,220,755
Fixed charges:				
6. Rent for leased roads and equipment	12,435,907	13,034,665	61,799,155	61,921,410
7. Interest deductions ¹	32,440,264	34,626,907	161,029,719	172,823,732
8. Other deductions	123,407	120,397	553,675	663,622
9. Total fixed charges	44,999,578	47,781,969	223,382,549	235,408,764
10. Income after fixed charges	67,491,734	62,345,044	275,132,342	271,791,991
11. Contingent charges	2,842,943	2,359,838	13,718,000	11,853,974
12. Net income	64,648,791	59,985,206	261,414,342	259,938,017
Depreciation (Way and structures and Equipment)				
13. Amortization of defense projects	27,753,978	26,756,241	137,920,275	132,587,946
14. Amortization of defense projects	19,906,733	15,426,740	97,526,394	73,767,739
15. Federal income taxes	112,499,335	115,480,454	488,563,360	522,624,930
16. Dividend appropriations:				
On common stock	40,738,091	38,562,120	69,585,782	64,426,526
On preferred stock	9,580,755	6,646,241	18,181,346	13,282,398
Ratio of income to fixed charges (Item 5 ÷ 6 - 04)	2.50	2.30	2.23	2.15
Balance at end of May				
Selected Assets and Liability Items				
17. Expenditures (gross) for additions and betterments—Road			\$81,385,177	
18. Expenditures (gross) for additions and betterments—Equipment			110,291,293	
19. Investments in stocks, bonds, etc., other than those of affiliated companies (Total, Account E707)			564,203,822	\$586,714,498
20. Other unadjusted debits			488,489,950	445,912,509
21. Cash			1,248,227,003	1,153,808,018
22. Temporary cash investments			1,812,561,683	1,834,333,129
23. Special deposits			292,245,245	163,871,422
24. Loans and bills receivable			378,563	205,956
25. Traffic and car-service balances—Dr.			49,011,293	55,555,975
26. Net balance receivable from agents and conductors			140,352,353	149,467,420
27. Miscellaneous accounts receivable			637,128,693	652,913,290
28. Materials and supplies			606,489,353	582,555,924
29. Interest and dividends receivable			40,286,066	29,333,011
30. Rents receivable			3,571,508	2,147,097
31. Other current assets			55,611,405	62,638,677
32. Total current assets (items 21 to 31)			4,885,863,165	4,686,829,919
40. Funded debt maturing within 6 months ²			131,138,300	172,926,367
41. Loans and bills payable			3,985,000	6,538,386
42. Traffic and car-service balances—Cr.			191,044,372	209,425,981
43. Audited accounts and wages payable			492,340,579	490,636,187
44. Miscellaneous accounts payable			208,247,968	131,563,474
45. Interest matured unpaid			100,393,523	43,063,354
46. Dividends matured unpaid			8,313,990	7,389,602
47. Unmatured interest accrued			61,871,743	67,862,875
48. Unmatured dividends declared			60,468,212	48,207,765
49. Unmatured rents accrued			32,492,638	32,411,303
50. Taxes accrued			1,799,929,730	1,899,241,222
51. Other current liabilities			179,259,636	87,042,817
52. Total current liabilities (items 41 to 51)			3,138,347,391	3,023,382,966
53. Analysis of taxes accrued:				
U. S. Government taxes			1,655,586,597	1,742,482,919
Other than U. S. Government taxes			144,343,133	156,758,303
54. Other unadjusted credits			688,391,253	461,486,019

¹ Represents accruals, including the amount in default.

² Includes payments of principal of long-term debt (other than long-term debt in default) which will become due within six months after close of month of report.

Compiled by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission. Subject to revision.

among waterway projects which he thought should be developed; while he said the "modest beginning" made in the field of highway improvement and construction was "not enough." With respect to the manpower shortage in the transportation field, Mr. Barkley was "happy to know that, according to its announcement, the War Department will facilitate the release of men as soon as possible who have had experience in transportation and are otherwise qualified for discharge."

Senator Johnson, Democrat of Colorado, was not so gentle with the War Department. He made a speech challenging that department's contentions as to the size of the Army required for the Pacific war. "The transportation system of the country," Senator Johnson said in the course of the speech, "has been demoralized by

hauling around the country without purpose and without design men who should have been discharged. At the same time the Army has left the railroads without sufficient employees to man their trains."

Meanwhile Senator Mead, Democrat of New York and chairman of the special committee investigating the war effort, obtained permission to file various reports during the recess, including one on transportation. This committee has recently completed its inquiry into rail-transportation arrangements for troops returning from Europe.

Later on Mr. Mead expressed his fears that the Senate might be taking its recess at a time "when we should really remain in session," for "we are leaving in the midst of a very serious crisis in our military and our essential domestic economy." In the

latter connection he listed the "transportation crisis" and other "bottlenecks." "Unless provision is made to prevent a breakdown of our railroad transportation system to provide needed materials for our military and domestic economy, very serious consequences may result," he added.

Also, Mr. Mead thought something should have been done about pending "full employment legislation," the proposed airport construction program, and other bills, "including appropriations for rivers and harbors projects already authorized," and "appropriations for the federal roads bill." As noted elsewhere herein, Mr. Mead went on to introduce a resolution calling for a Senate transportation study to provide, among other things, information for the benefit of committees which would be appropriating money for rivers and harbors and other improvements.

C. N. R. Bout-de-l'Île Line Now Open for Traffic

On August 12 Canadian National trains operating between Montreal and Rawdon, Joliette, Shawinigan Falls, Abitibi, the Saguenay and the Lake St. John country were routed into the new Central station, Montreal, instead of using the Moreau street station in the eastern part of the city.

This change has been made possible by the completion of the new Bout-de-l'Île-Eastern Junction line, now opening for traffic. The 14.29-mile line, begun in April, 1944, was part of a plan approved by Parliament to improve railroad service on the Island of Montreal and commercial communications between the metropolis and the regions it serves. The new line also has the advantage of linking C. N. R. freight yards in the eastern and western parts of the city, thus eliminating a detour of 108 miles via Joliette, Rinfret and Fresnières Junction.

Rise in C. N. J. Commuter Fares Could Bring Diesels

If Jersey Central commuters "were agreeable to paying more for their service, and if some solution of our tax problems, past and present, could be found," R. E. Thompson, C. N. J. property manager, sees likelihood that the railroad might purchase some modern Diesel passenger locomotives for commuter service.

Speaking before the Plainfield (N. J.) Lions Club, Mr. Thompson explained that C. N. J. commuter rates generally "are lower than on any other railroad serving New York." Plainfield commuters, he said, were paying the same rates they paid 25 years ago.

"If we could bring these rates in line with some of these other railroads, it is possible that we could put in some clean, modern Diesel passenger locomotives."

Rail Equipment Plants Get High Man-power Priority Rating

Nine plants of six Chicago companies manufacturing railroad equipment have been granted high man-power priorities by the War Manpower Commission as a means of speeding up railroad operations during the redeployment of army personnel. The manufacturing firms given the new rating are the American Brake Shoe Company,

American Car & Foundry Co., Chicago Railroad Equipment Company, Morden Frog & Crossing Works, North American Car Corporation, and the Pullman-Standard Car Manufacturing Company.

Wool Rate Hearings Now Set to Begin January 9, 1946

Hearings in connection with the Interstate Commerce Commission's No. 28863 investigation of freight rates on wool and mohair throughout the United States are now scheduled to begin at the Morrison Hotel, Chicago, on January 9, 1946, before Commissioner Patterson and Examiner Mattingly. The commission has made public a July 30 order stipulating that the hearings would commence "in the month of January, 1946," while an August 2 notice from Secretary W. P. Bartel fixed the January 9 date.

As noted in the *Railway Age* of July 14, page 73, the commission on July 2 entered an order postponing the hearings "indefinitely," while denying railroad petitions that they be postponed "for the duration of the war with Japan." The proceeding was recently reinstated by the commission after it had been ordered discontinued in 1943.

The notice from Secretary Bartel reveals that the January hearings at Chicago will be followed by others at Fort Worth, Tex., Denver, Colo., Salt Lake City, Utah, Portland, Ore., and San Francisco, Calif. It adds that "after a reasonable interval following this series of hearings, another hearing will be held at Chicago for the receipt of respondents' evidence and for rebuttal."

I. C. C. Again Recommends Block System Installation

A side collision at McGriff, Ga., on the Southern's line from Macon to Brunswick, at 2:55 a.m. on June 17, could have been prevented "if an adequate block system had been in use," according to the report of the investigation by the Interstate Commerce Commission under the supervision of Commissioner Patterson. As a result of this finding, the report recommended the installation of "an adequate block system" on the line involved.

Trains were operated on this single-track line by timetable and train orders, there being no block system in use. In the 30 days preceding the accident, the average daily movement was 8.4 trains. The immediate cause of the collision was "an inferior train occupying the main track on the time of an opposing superior train," the report said. The inferior train was No. 52, a northbound 42-car freight, while the opposing superior train was No. 7, the southbound "Kansas City-Florida Special," a passenger train made up of a locomotive, 3 head-end cars, 5 coaches and 4 sleeping cars in the order named.

The crews of both trains held a train order providing that No. 7 should wait at McGriff until 2:50 a.m. No. 52 arrived at McGriff about 2:30 a.m. and entered the siding at that point, on the east side of the main track, stopping about 2:35 a.m. with the engine some 900 ft. south of the clearance point at the north end of the siding. This left the 33rd to 37th cars of the freight standing on the turnout at the

south end of the siding and the five rear cars and caboose on the main track south of the switch. The engineer extinguished the headlight on No. 52, as required by rule when a train "turns out to meet another and has stopped clear of the main track." The switch stand at the south siding switch was so located that the cars of the freight prevented it being seen from a train approaching from the north.

About 20 min. after No. 52 had stopped, the 35th car was struck by the engine of No. 7, which was moving about 35 m.p.h. Four freight cars and the locomotive and the first four cars of No. 7 were derailed and more or less damaged. There were no fatalities, but 25 passengers, 1 person carried on contract and 2 employees were injured. The maximum authorized speed for No. 7 was 55 m.p.h., and it was moving about 50 m.p.h., according to the report, when the brakes were applied in emergency at a point some 800 ft. north of the south siding switch.

When the freight entered the siding, the engineer, fireman, conductor and front brakeman were on the engine and the flagman was on the caboose. The fireman was looking to the rear to report when the caboose was clear of the main track, and when he saw the caboose marker lamps he notified the engineer, who stopped the train. The fireman then proceeded to clean the fire, and none of the employees at the front of the train made any effort to make sure the main track had been cleared, nor to provide flag protection against an opposing train.

The flagman on the caboose said that he gave proceed signals with his lantern after the freight stopped without clearing the main track, but there was no response. Taking this to mean that the train could not proceed, he went to the rear, as required by rule, to provide flag protection against a following train. The report suggested that the fireman saw the right-hand caboose marker lamp over the top of the 34th car in the train, a gondola, as it was moving on the turnout, and mistakenly concluded he saw the left-hand marker light, which would not have been visible to him until the caboose entered the turnout.

Says First Duty of Fireman on Diesels Is to Look Ahead

As a result of its investigation of the circumstances of a rear-end collision June 28 at Montview, Va., involving two northbound Southern freight trains, one pulled by a 3-unit Diesel-electric locomotive, the Interstate Commerce Commission's report, prepared under the supervision of Commissioner Patterson, concluded with the statement that, "if the fireman [of the Diesel] had been required to subordinate the duty of inspecting the motors to the duty of maintaining a lookout ahead, it is probable he would have seen the preceding train in time to take necessary action to avert the accident."

The preceding 32-car train, Extra 4906 North, was standing with its rear end 0.89 mile north of a yard limit sign near the Montview station, which is about 4 miles south of the passenger station at Lynchburg, Va., on the double-track main line from Washington, D. C., to Atlanta, Ga.

Both trains were on the northward track.

in territory where operations with the current of traffic are by timetable, train orders and an automatic block signal system. The following train of 67 cars and caboose, Extra 4108 North, had passed a signal displaying a yellow aspect, indicating proceed prepared to stop at next signal, and, at a point 1.75 mile south of the rear of the preceding train, had stopped at the next signal, which displayed a red aspect, indicating stop then proceed at restricted speed.

Rules applying within yard limits required the speed of the following train to be so controlled that it could be stopped within one-half the range of vision. In the vicinity of the collision, the view ahead from the following train was restricted by embankments and curvature to about 900 ft. Extra 4108 proceeded past the yard limit sign and approached the scene of the accident at a speed of about 18 m.p.h. The Diesel locomotive is equipped with a safety control feature requiring the engineer to keep his foot on a valve, or his hand on the brake valve handle to prevent an automatic brake application, but this did not operate, nor were the brakes applied, prior to the collision.

As the engineer was killed in the accident, it could not be determined whether or when he discovered the preceding train. The fireman entered the control compartment, after having been in the operating compartment of the locomotive, in time to see the caboose of the standing train immediately ahead, but not in time to warn the engineer. It was clear and daylight at the time of the accident, and the brakes on Extra 4108 had functioned properly. The cause of the collision, therefore, according to the report, was "failure properly to control the speed of the following train."

The caboose and five rear cars of the standing train and the three units of the locomotive and first 11 cars of the following train were derailed, and most of the de-

railed equipment, including the Diesel units, was badly damaged. Two employees were injured in addition to the one killed. The preceding train was not required to provide flag protection within yard limits against extra trains.

Mead Stresses Need for Transport Study

(Continued from page 261)

representative of the American Association of State Highway Officials"; and "Aviation's Future in the United States," by "an expert, one who has assumed an important role in advancing air transportation here in the United States." He also inserted a letter discussing the prospects for the railroads after the war which he had received last December from "an officer of the Association of American Railroads."

Of the physical side of railroading, the A. A. R. officer found it possible to "speak with confidence" as to the post-war situation.

"The real uncertainties in the prospect for railroads," he added, "are to be found in the economic field where there are three big questions: What will be the total production and exchange of goods in the country, and the total traffic requiring transportation service? What will be the conditions under which the railroads will have to compete for their share of this traffic? What will be the outlook for the private investor in railroads, who should be depended upon to finance the [planned] program of improvement?"

Club Meeting

A. E. Perlman, chief engineer, Denver & Rio Grande Western, and chairman of the engineering and mechanical research subcommittee, Railroad Committee for the Study of Transportation, A. A. R., will address the 334th meeting of the Pacific Railway Club August 23 at 7:30 p. m., at the Biltmore hotel, Los Angeles, Calif. His topic will be the "Future Possibilities in Railroad Research."

An additional feature will be an exhibit of model Santa Fe, Union Pacific and Southern Pacific crack trains and locomotives by the National Association of Model Railway Clubs. Frank Anderson, of that organization, will also speak.

EMPLOYEE SUGGESTIONS A HABIT.—The New Haven reports that its employees have submitted 7,524 ideas since the suggestion system was inaugurated as an employee relation service little more than a year ago. And for an accepted 570 of these proposals the railroad has paid awards totaling \$6,050. One employee, Robert A. Sanders, operator at Plainville, Conn., has received eight awards; while several others have submitted and have had accepted from four to seven suggestions. Among the winners have been clerks, stenographer-operators, assistant foremen, car inspectors, carpenters, machinists, a caboose inspector, elevator operator, police patrolman, carman, freight conductor, passenger representative, laborer, fireman, electrician, and assistant station master.

Equipment and Supplies

FREIGHT CARS

Southern Pacific to Buy 3,550 Freight Cars

The Southern Pacific has asked for prices for 3,550 freight cars, including 1,600 50-ton box, 750 50-ton automobile, 200 50-ton gondola, 550 50-ton drop bottom gondola, 250 70-ton hopper, 150 70-ton covered hopper and 50 caboose cars.

Baltimore & Ohio Buys 2,000 Hopper Cars

The Baltimore & Ohio has placed orders for 2,000 steel hopper cars of 50-tons' capacity, allocating 1,000 to the Bethlehem Steel Company, 500 to the Ralston Steel Car Company and 500 to the Pressed Steel Car Company. The railroad has issued inquiries for an additional 350 cement cars of 70 tons capacity.

Louisville & Nashville Buys 2,000 Freight Cars

The Louisville & Nashville has placed orders for 2,000 freight cars, allocating 1,000 hopper cars to the Pullman-Standard Car Manufacturing Company, 400 50-ton box cars to the Mount Vernon Car Manufacturing Company and 600 50-ton box cars to the American Car & Foundry Co. The American Car & Foundry Co. order was reported in the *Railway Age* of August 4.

The MISSOURI-KANSAS-TEXAS has inquiries out for 50 70-ton covered hopper cars.

The CANADIAN NATIONAL is inquiring for 300 50-ton refrigerator cars.

The CHICAGO, ROCK ISLAND & PACIFIC has inquiries out for 1,000 50-ton automobile cars.

The DETROIT, TOLEDO & IRONTON has ordered 200 70-ton covered hopper cars from the Greenville Steel Car Co.

The ST. LOUIS-SAN FRANCISCO has inquiries out for 300 50-ton automobile cars and 100 70-ton covered hopper cars.

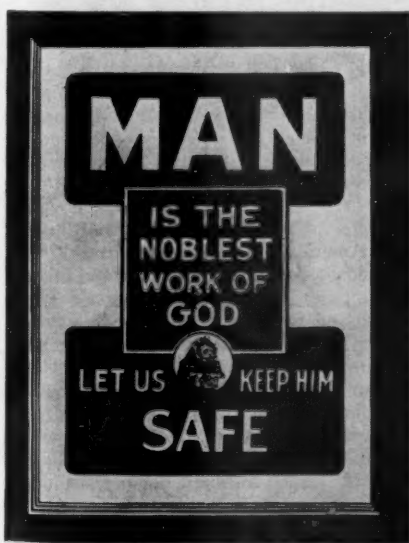
The DENVER & RIO GRANDE WESTERN is in the market for 200 70-ton ballast cars and 25 70-ton covered hopper cars.

The PERE MARQUETTE has ordered 200 50½-ft. steel automobile cars from the Ralston Steel Car Company and 100 70-ton steel covered hopper cars from the Greenville Steel Car Company.

The CHICAGO & NORTHWESTERN has issued inquiries for 800 70-ton gondola cars of which 400 are for itself and 400 for the Chicago, St. Paul, Minneapolis & Omaha. The railroad is expected to enter the market for an additional 800 50-ton box cars, 500 50-ton automobile cars and 400 50-ton flat cars.

PASSENGER CARS

The NEW YORK CENTRAL has asked for prices on various sized lots of baggage cars and sleeping cars.



Poster No. 263, August installment of the "All the Year-Every Year Safety Program," Which Is Now Being Distributed by the Committee on Education, Safety Section, A. A. R.

Construction

CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC.—This road has completed plans for a \$4,000,000 expansion plan of its shops at Milwaukee, Wis., which is to begin as soon as priorities and equipment are available. The program calls for improvements totaling \$1,200,000 to be completed this year, the majority of work to be done on the Diesel locomotive shops, passenger car steel fabrication shops and store houses.

Supply Trade

R. A. Williams has been elected a director and executive vice-president in charge of sales, subsidiary companies and foreign representatives of the American Car &



R. A. Williams

Foundry Export Co. Mr. Williams also is vice-president in charge of sales of the American Car & Foundry Co.

N. J. Clarke and J. M. Schlemdorf have been elected senior vice-president and vice-president in charge of sales respectively of the Republic Steel Corp.

The Frank B. Nugent Company, St. Paul, Minn., has been appointed a representative of The Locomotive Finished Material Company, Atchison, Kan.

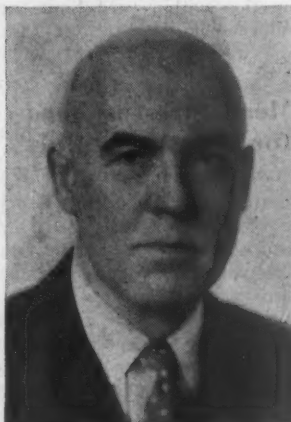
Christ T. Hansen has been appointed western sales manager and John H. Ichter eastern sales manager of the Standard Stoker Company, with headquarters at Chicago and New York respectively.

William Naumann, general factory manager of the Caterpillar Tractor Company, has been placed in charge of a newly-created productions division of the manufacturing department, with headquarters at Peoria, Ill.

OBITUARY

Harold McCready, district manager, New York office, of the Union Switch & Signal Co., died August 1. He was 60 years of age. Mr. McCready was graduated with a degree in electrical engineering from the Massachusetts Institute of Technology in 1908. He was employed as a signal helper on the Pennsylvania, Lines

West, during the summers of 1902 and 1903. He joined the Union Switch & Signal Co. in 1904 as circuit draftsman and worked on the construction of the New



Harold McCready

York subway until the summer of 1905. He was appointed signal foreman on the West Jersey & Seashore electrification in 1907. He was appointed assistant engineer of Union Switch & Signal in 1908 and engineer-in-charge, electrical department, in 1912. He was transferred to the sales department in 1914 as New York office manager and appointed assistant eastern manager in 1923. He was appointed district manager of the New York office in January, 1937.

Abandonments

KANE & ELK.—Division 4 of the Interstate Commerce Commission has approved this road's application for authority to abandon its entire line from East Kane, Pa., to James City, 3 miles.

NEW YORK CENTRAL.—Division 4 of the Interstate Commerce Commission has extended for a further period of 2 years its reservation of jurisdiction with respect to the protection of employees who may be adversely affected by this road's line abandonment authorized in 1943 in the Finance Docket 14008 proceedings.

READING.—This road and the Mine Hill & Schuylkill Haven have applied to the Interstate Commerce Commission for authority, respectively, to abandon operation of, and abandon, a 1,515 ft. section of the latter's Richardson branch in Cass Township, Schuylkill County, Pa.

SEABOARD AIR LINE.—This road has applied to the Interstate Commerce Commission for authority to abandon a 1.3-mile segment of a branch line from a point near Aleoma, Fla., to Hesperides.

TEXAS & NEW ORLEANS.—Division 4 of the Interstate Commerce Commission has authorized this road to abandon two segments of line in Louisiana, one from Youngsville to Milton, 4.27 miles, and one from Long to Milton, 4.47 miles, subject to the conditions for the protection of employees who may be adversely affected which were prescribed in the Burlington case, 257 I. C. C. 700

Financial

ARCATA & MAD RIVER.—*Deficit Status.*—On reconsideration, Division 4 of the Interstate Commerce Commission, with Commissioner Mahaffie dissenting without comment, has affirmed its previous finding (noted in *Railway Age* of November 11, 1944, page 740) that this road is not entitled to compensation for losses claimed as a result of federal control of railroads in and following World War I.

ARKANSAS & MEMPHIS RAILWAY BRIDGE & TERMINAL.—*Refunding.*—Division 4 of the Interstate Commerce Commission has authorized this company to issue \$2,865,000 of first mortgage serial bonds in connection with the retirement, at 103, of an equal principal amount of 5 per cent first mortgage gold bonds, due in 1964, now outstanding. The Missouri Pacific, St. Louis Southwestern and Chicago, Rock Island & Pacific, each of which owns one-third of the terminal's stock, at the same time were authorized, jointly and severally, to guarantee the payment of interest and principal on the new issue. The serial bonds have been sold at par, with interest rates varying with maturity dates from 4 per cent to 2½ per cent, to Shields & Company and others, the average rate of interest being 2.68 per cent. The net saving to maturity, as a result of this transaction, is estimated at \$1,262,985.

CHICAGO, BURLINGTON & QUINCY.—*Disposal of Bus Lines.*—All American Bus Lines has applied to the Interstate Commerce Commission for authority to acquire control of the Burlington Transportation Company by purchase of 51 per cent of its capital stock for \$1,500,000. All of Transportation's stock, except directors' shares, is now held by the Chicago, Burlington & Quincy. At the same time Transportation applied for authority to issue an additional 4,166 shares of common stock to the Burlington in prepayment of \$416,000 on a promissory note held by the parent company, in connection with an increase in the amount of its capital stock from \$500,000 to \$1,000,000. Simultaneously, the Burlington has applied for authority to acquire control of a new company, Burlington Truck Lines, by ownership of its stock, and Truck Lines has applied for authority to acquire all motor truck operations of Transportation, leaving that company in possession of its bus operations only.

All American now operates from Chicago and St. Louis to New York and other eastern cities and from Chicago to Los Angeles and San Francisco through southwestern states. Burlington Transportation Company links Chicago with Los Angeles and San Francisco along a northern route.

The purchase of the Burlington Transportation Company by All American will provide continuous service between East and West Coasts through northern states.

CHICAGO & EASTERN ILLINOIS.—*Equipment Trust Certificates.*—This company has applied to the Interstate Commerce Commission for authority to assume liability for \$1,440,000 of equipment trust certificates in connection with its acquisition of 500 50-ton hopper cars, being built by

the Pullman-Standard Car Manufacturing Company at a cost of \$2,800 each, and of three 2,000-hp. Diesel-electric road locomotives, being supplied by the Electro-Motive Division of General Motors Corporation at an approximate cost of \$175,000 each.

FLORIDA EAST COAST.—Reorganization.—The Southern Railway and affiliated companies have been authorized by Division 4 of the Interstate Commerce Commission to intervene in opposition to the proposed plan of reorganization of the F. E. C. whereby the Atlantic Coast Line would acquire control of the new company through ownership of a majority of its stock. The further hearing in the proceedings, which have been reopened for further consideration, will be held at a time and place to be designated later, the scheduled August 21 hearing having been cancelled.

GREAT NORTHERN.—Plans Refunding Operation.—The Great Northern has announced plans to sell at competitive bidding \$75,000,000 of new first mortgage bonds, series N and O, in the amount of \$37,500,000 in each series, due January 1, 1990, and January 1, 2000, respectively. The company proposes to call for redemption on January 1, 1946, \$50,000,000 of outstanding general mortgage 3¾ per cent series I bonds due 1967 and to provide funds for the redemption on July 1, 1947, of \$36,956,000 of outstanding general mortgage 4½ per cent series E bonds due 1977. The series I bonds are redeemable on any interest date at 104 and accrued interest and the series E issue on July 1, 1947, on 105 and accrued interest.

GREAT NORTHERN.—Promissory Notes.—This company has applied to the Interstate Commerce Commission for authority to issue \$3,825,217 of promissory notes in evidence, but not in payment, of indebtedness under conditional sales contracts for the purchase of the following equipment: From the American Car & Foundry Company, 250 flat cars at a total cost of \$885,437; from the Pressed Steel Car Company, 500 gondolas at a total cost of \$1,957,280; and from the Electro-Motive Division of General Motors Corporation, six 2,700-hp. Diesel-electric freight locomotives at a total cost of \$1,462,766, and six 1,000-hp. Diesel-electric switching locomotives at a total cost of \$476,038.

GULF, MOBILE & OHIO.—Becomes Alton's Chief Creditor.—Federal Judge E. R. Shaw at Chicago has authorized the Gulf, Mobile & Ohio to become the principal creditor of the Alton. Under an order signed by Judge Shaw the G. M. & O. replaces the Baltimore & Ohio as the principal entity in the reorganization of the Alton.

MIDDLETOWN & UNIONVILLE.—Reorganization.—Division 4 of the Interstate Commerce Commission has approved a plan for this road's reorganization under Section 77 of the Bankruptcy Act which eliminates fixed charges and makes no provision for the old company's common stock or adjustment mortgage income bonds, both having been found to have no value. Total capitalization is reduced from \$500,500 to \$149,500, this being made up of \$20,000 of 4½ per cent first mortgage contingent in-

terest bonds and \$129,500 of common stock of \$50 par value. The old company's capitalization included \$185,000 of 4 per cent first mortgage bonds (on which the interest rate had been reduced from 6 per cent), \$165,500 of 3 per cent (originally 6 per cent) adjustment mortgage bonds, and \$150,000 of common stock of \$100 par value. The plan provides that holders of the old first mortgage bonds shall receive 70 per cent of the principal amount of their claims in new common stock; no provision is made for the balance of the principal amount or for unpaid interest. Three bondholders, including the company's president, hold about 82.5 per cent of these bonds, and they will supply such new money as is needed to accomplish the reorganization, receiving therefor an equal principal amount of new contingent interest bonds. Annual interest requirements (contingent) of the reorganized company will be \$900. The plan provides for the annual payment of \$1,000 into a sinking fund applicable to the new bonds before dividends are paid on the stock.

NEW YORK CENTRAL.—Line Extension.—In a proposed report Examiner Lucian Jordan has recommended denial by the Interstate Commerce Commission of the application of the Lake Erie, Alliance & Wheeling, controlled by this company by ownership of all its capital stock, for authority to construct a 2.8-mile branch in the vicinity of Hopedale, Ohio, to gain access to a coal mine which would be operated under a sublease from the Jefferson Coal Company, which is controlled by the New York Central through ownership of a majority of its stock. The application was opposed by the Pennsylvania and the Pittsburgh & West Virginia, and the examiner's recommendation was based on his findings that the extension would constitute an invasion of territory adjacent to and served by the P. & W. V. and that the latter could handle the resulting traffic more economically by the construction of a spur about ½ mile in length.

NEW YORK, SUSQUEHANNA & WESTERN.—Annual Report.—The 1944 annual statement of this road shows a net income, after interest and other fixed charges, of \$348,388, as compared with a net income of \$500,802 in 1943. Selected items from the income statement follow:

	1944	Increase or Decrease Compared With 1943
Average Mileage Operated		
RAILWAY OPERATING REVENUES	\$5,659,351	-\$134,521
Maintenance of way and structures		
Maintenance of equipment	486,760	+21,249
Transportation	2,023,313	+9,487
TOTAL OPERATING EXPENSES	3,208,537	+77,246
Operating ratio	56.69	+2.65
NET REVENUE FROM OPERATIONS	2,450,813	-211,767
Railway tax accruals	872,751	+65,362
RAILWAY OPERATING INCOME	1,578,062	-277,129
Net rents—Dr.	667,877	-98,046
NET RAILWAY OPERATING INCOME	910,185	-179,083
Total other income	77,192	+13,711
TOTAL INCOME	987,377	-165,372

Rent for leased roads and equipment	3,500	
Interest on funded debt	619,290	
TOTAL FIXED CHARGES	633,435	-7,067
Balance of income transferred to earned surplus	348,388	-152,414

SOUTHERN PACIFIC.—Calls Four Per Cent Bonds.—Directors of this road have authorized the redemption on January 1 next at 105 the \$159,459,000 of Southern Pacific Railroad Co., first refunding mortgage 4 per cent bonds outstanding, due 1955. Of the total, \$143,473,500 is held by the public and \$15,985,500 by the Southern Pacific Co., parent corporation. To provide funds for the redemption, the railroad will sell \$125,000,000 of bonds to be issued under a new first mortgage. An additional \$25,000,000 of bonds will be sold to the Southern Pacific Co. As a result of this operation, outstanding debt of the Southern Pacific System in the hands of the public will be decreased an additional \$18,473,500.

WESTERN PACIFIC.—Refunding.—In a proposed report Examiner F. E. Grutzik has recommended that the Interstate Commerce Commission should deny this company's application for authority to issue \$10,000,000 of series B 3 per cent first mortgage bonds, due in 1974, in connection with a plan to retire at 102½ an equal principal amount of series A 4 per cent first mortgage bonds outstanding. The series A bonds, while dated 1939, were issued to the Reconstruction Finance Corporation in consummation of the road's reorganization under the plan finally approved by the commission last year, as noted in *Railway Age* of November 4, 1944, page 708. The recommendation of denial was based on the examiner's finding that the company's cash and liquid assets, including reserves for contingent tax liability, amounted on May 31 to \$30,629,036, or a sum adequate in his opinion to meet current requirements and contingencies and to pay in full the outstanding series A bonds without resorting to refinancing. The new issue, therefore, he found not "reasonably necessary or appropriate for the purpose of enabling the applicant to perform its service to the public as a common carrier." In the event that Division 4 of the commission should reach a different conclusion and authorize the new issue, the examiner recommended that such approval should be after consideration of a condition requiring that an adequate sinking fund be provided for its retirement.

Average Prices Stocks and Bonds

	Last Aug. 7	Last week	Last year
Average price of 20 representative railway stocks	54.32	55.15	40.90
Average price of 20 representative railway bonds	97.49	98.11	89.06

Dividends Declared

Alabama & Vicksburg.—\$3.00, semi-annually, payable October 1 to holders of record September 8.
Atlanta & West Point.—\$2.50, payable August 1 to holders of record July 25.
Cincinnati Inter-Terminal.—4% preferred, \$2.00, semi-annually, payable August 1 to holders of record July 20.
Fort Wayne & Jackson.—5½% preferred, \$2.75, semi-annually, payable September 1 to holders of record August 20.
Michigan Central.—\$25.00, semi-annually, payable July 31 to holders of record July 20.
Rutland & Whitehall.—\$1.05, quarterly, payable August 15 to holders of record August 1.

Southern Pacific.—75¢, quarterly, payable September 17 to holders of record August 27.
 Vicksburg, Shreveport & Pacific.—preferred and common, both \$2.50, semi-annually, payable October 1 to holders of record September 8.
 Western of Alabama.—\$3.00, payable August 1 to holders of record July 25.

Railway Officers

EXECUTIVE

Colonel John Wheeler, executive assistant of the Chicago, Burlington & Quincy, who has been on leave of absence for the past four years to serve with the army engineers, has returned to his headquarters at Chicago.

J. J. Finegan, whose promotion to assistant to the executive vice-president of the Texas & Pacific, with headquarters at Dallas, Tex., was reported in the *Railway Age* of August 4, was born at Nyack, N. Y., on August 10, 1904, and attended Drake's Business School in New York City. He entered railway service on October 29, 1920, as a clerk in the office of the secretary and treasurer of the Texas & Pacific at New York. In June, 1924, he was promoted to secretary to the secretary and treasurer and in April, 1928, he was appointed secretary to the chairman of the board of the Missouri Pacific Lines, with headquarters at New York. In November, 1928, he returned to the Texas & Pacific as chief clerk to the secretary and treasurer, with headquarters at New York and at Cleveland, Ohio, and in September, 1931, he was appointed chief clerk to the secretary and treasurer of the Missouri Pacific Lines at Cleveland. Mr. Finegan was elected assistant secretary and assistant treasurer of the Texas & Pacific on January 31, 1938, and in June, 1939, he was advanced to secretary, the position he held at the time of his new appointment.

FINANCIAL, LEGAL AND ACCOUNTING

G. A. Huth, tax commissioner of the Wabash, with headquarters at St. Louis, Mo., has retired after 39 years of service.

Hector Esdaile, paymaster of the Canadian Pacific at Montreal, Que., since January, 1936, has retired.

L. W. Wing has been elected assistant secretary and assistant treasurer of the Pere Marquette, with headquarters at Detroit, Mich., succeeding **C. H. Reiser**, who has retired after 48 years of service.

W. H. Wright, treasurer and paymaster of the Northern Alberta (owned jointly by the Canadian National and the Canadian Pacific), at Edmonton, Alta., has been appointed assistant treasurer of the Grand Trunk Western, with headquarters at Detroit, Mich., succeeding **E. W. Hotchkiss**, who has retired.

Julius W. Bourscheidt, whose promotion to treasurer of the St. Louis Southwestern, with headquarters at St. Louis, Mo., was reported in the *Railway Age* of

July 21, was born at St. Louis on July 6, 1884, and entered railway service in October, 1902, in the mechanical department of the Missouri Pacific at St. Louis, the city which except for a short period has been his subsequent headquarters. In 1904 he went with the Wabash as a clerk of the accounting department, being promoted to special accountant in 1915. In 1918 Mr. Bourscheidt resigned to become a special accountant of the Pere Marquette, with headquarters at Detroit, Mich., but returned to the Wabash one year later as chief clerk to the vice-president and comptroller at St. Louis. In 1921 he went with the St. Louis Southwestern as a special accountant and in 1926 he was appointed chief clerk, disbursements. In 1928 Mr. Bourscheidt was promoted to auditor, the position he held at the time of his new appointment.

OPERATING

D. F. Alexander, assistant superintendent of transportation of the Missouri & Arkansas at Harrison, Ark., has been promoted to superintendent of transportation, with the same headquarters, succeeding **R. M. Atterberry**, whose resignation was reported in the *Railway Age* of June 16.

R. F. Dickerson, superintendent of the Jersey Central Lines at Long Branch, N. J., has been assigned to special duties for several months, and **M. H. Strollo**, trainmaster at Long Branch, has been appointed acting superintendent for the same period.

C. D. Love, who has been on leave of absence from the Louisville & Nashville to serve with the armed forces, has returned to that road and has been promoted to general superintendent in charge of the operating department for the entire system, with headquarters at Louisville, Ky. He was previously superintendent of the Louisville division.

TRAFFIC

Lester B. Stiebling, commercial agent of the Southern at Louisville, Ky., has been promoted to district freight agent, with the same headquarters.

Percy E. Benjamin, traffic development agent of the New York, New Haven & Hartford, has been named manager, department of industrial development, at Boston, Mass., a newly created position.

Col. Charles C. Dawes, who has been on leave of absence from the Chicago, Burlington & Quincy since 1940 to serve with the armed forces, has returned to that road as industrial agent, with headquarters at Chicago.

T. G. Smith, who has been on leave of absence from the Wabash to serve with the armed forces of the United States, has been honorably discharged and has returned to his former position of general agent, with headquarters at Little Rock, Ark.

N. H. Jones, district passenger agent of the Chicago & North Western at New

York, has been promoted to assistant general passenger agent, with headquarters at Chicago. **J. R. Brennan**, who has been on special assignment to the passenger traffic department, has been advanced to assistant to the passenger traffic manager, with headquarters as before at Chicago.

Thomas C. Sparks, whose appointment as eastern manager of industrial development of the Baltimore & Ohio and the



Thomas C. Sparks

Staten Island Rapid Transit with headquarters at New York, was announced in the *Railway Age* of August 4, was born at Baltimore, Md., and entered railroading with the Baltimore & Ohio as a chairman in the engineering department in March, 1923. After serving variously as rodman, levelman, inspector, and transitman, he was appointed field engineer in the engineering department on October 1, 1935. On May 16, 1939, he was named industrial engineer in the commercial development department, the post he held at the time of his recent elevation to eastern manager of industrial development.

William D. Gordon, freight representative of the Pennsylvania at Boston, Mass., has been promoted to district freight agent, with headquarters at Nashville, Tenn., succeeding **Howard L. Gordon**, who has been granted a leave of absence to enter the military service.

J. N. Clark, division freight and passenger agent of the Missouri Pacific at Atchison, Kan., has been promoted to general agent, with headquarters at Lincoln, Neb., succeeding **B. L. Clough**, who has retired. **J. S. Rogers** has been appointed division freight and passenger agent at Atchison, replacing Mr. Clark.

Harold E. Hay, district passenger agent of the Pere Marquette at Chicago, has been promoted to assistant general passenger agent, with the same headquarters, succeeding **A. F. LaBundy**, who has retired because of ill health. The positions of general western passenger agent and district passenger agent have been abolished.

Virgil T. Ivie, general agent, freight and passenger departments of the Southern at Savannah, Ga., has been appointed assistant general freight agent at Atlanta,

FOR **PROFITABLE** POST-WAR L.C.L. TRAFFIC



Post-war business will demand still faster freight transportation, and profitable L. C. L. traffic will require a delivery service that will outdistance motor competition.

For such "cannonball" service, modern motive power is a first essential. Locomotives must be capable of hauling heavy trains at sustained high speeds on long runs.

LIMA LOCOMOTIVE WORKS



INCORPORATED, LIMA, OHIO

Ga., succeeding William H. Russell, whose appointment as general industrial agent there was announced in the *Railway Age* of August 4. Jarman E. Dixon, district freight agent at Jacksonville, Fla., has been named general agent at Savannah replacing Mr. Ivie. R. S. Brown, district passenger agent at Augusta, Ga., has been promoted to division passenger agent with the same headquarters.

ENGINEERING & SIGNALING

M. S. Miller, whose appointment as engineer, maintenance of way, of the Reading at Philadelphia, Pa., was announced in the *Railway Age* of July 14, was born at Schodack, N. Y., and was graduated from Rensselaer Polytechnic Institute with a civil engineer's degree in 1909. After serving as a draftsman of the American Bridge Co. at Pencoyd, Pa., and later working on the building of an elevated railway in Philadelphia, he joined the Reading's maintenance of way department as assistant supervisor, serving at Harrisburg, Pa., Mahanoy Plane, and on the Atlantic City (N. J.) railroad from 1910 to June, 1914, when he was promoted to supervisor at Mahanoy Plane. He trans-



M. S. Miller

ferred to Philadelphia subsequently, and in November, 1923, was appointed division engineer at Harrisburg, later returning to Philadelphia in the same capacity. Mr. Miller was named acting engineer, maintenance of way, at Philadelphia, in August, 1943, and retained that title until his recent appointment as engineer, maintenance of way.

MECHANICAL

R. G. Bennett, Jr., master mechanic of the Virginian's Norfolk division at Victoria, Va., has been transferred to the New River division at Elmore, W. Va., succeeding L. C. Kirkhuff, who has been named assistant superintendent of motive power at Princeton, W. Va. C. G. Foster, general foreman at Sewalls Point, Va., has been named master mechanic at Victoria succeeding Mr. Bennett.

W. R. Harrison, who has been on leave of absence from the Atchison, Topeka & Santa Fe, has returned to his position

of mechanical superintendent of the Southern district, with headquarters at Amarillo, Tex., relieving P. J. Danneberg, who returns to his former position of mechanical superintendent of the Northern district, with headquarters at La Junta, Colo. W. W. Lyons, who has been serving as acting mechanical superintendent of the Northern district, returns to his former position of master mechanic at Dodge City, Iowa, replacing D. J. Everett, who has been serving as acting master mechanic at that point and now returns to his previous position of general mechanical inspector, with headquarters at Topeka, Kan.

SPECIAL

J. B. Shores has been appointed director of public relations of the Texas & Pacific with headquarters at Dallas, Tex.

C. F. Adams, train rules examiner of the Texas & Pacific at Dallas, Tex., has been promoted to superintendent of rules and safety, with the same headquarters.

William W. Martin, district manager of public relations of the Railway Express Agency's Allegheny department at Philadelphia, Pa., has been appointed superintendent of public relations at New York.

Charles A. Strickland, until recently a major in the United States Army Service Forces in charge of the procedures bureau at Atlanta, Ga., has joined the Baltimore & Ohio as manager of the newly established office methods and procedures department with system jurisdiction at Baltimore, Md.

Michael F. Morrissey, formerly a member of the law enforcement division of the Federal Security Administration at Washington, D. C., has been appointed chief special agent of the Pullman Co., with headquarters at Chicago. Mr. Morrissey was born at Indianapolis, Ind., on July 21, 1898. He entered railway service in 1914 as a messenger of the Chicago, Indianapolis & Louisville, and one year later he went with the Lake Erie & Western as a clerk. In 1917 he resigned to go with the New York Central where he served as yard brakeman and later as yard conductor, and three years later he became a brakeman on the Indianapolis Union, with headquarters at Indianapolis. On June 22, 1922, Mr. Morrissey was appointed a patrolman on the Indianapolis police department, holding various positions with that organization until June 16, 1931, when he was advanced to chief of police. He served for a short time in 1942 as director of plant protection for the Bectit McCone Parsons Corp., at Birmingham, Ala., and in June, 1943, he was appointed to the position he held at the time of his new connection.

OBITUARY

John Foster Gilchrist, chairman of the board of the Chicago & Illinois Midland, and a retired vice-president of the Commonwealth Edison Company, died at Chicago on August 4 following a long illness.

Curtis Wrasle Brown, Jr., secretary and assistant treasurer of the Virginian at

New York, died there on August 6. Mr. Brown was born in Roane County, Tenn., in December, 1898, and attended Maryville, Tenn., college. After serving in the U. S. Navy in the first World War, he entered railroading with the Virginian in 1919 as a clerk at Norfolk, Va., and later served in various capacities, including general bookkeeper and general accountant. On July 1, 1941, Mr. Brown was appointed assistant to secretary and treasurer at New York, and on January 1, 1942, he was promoted to secretary and assistant treasurer, the position he held at the time of his death.

Charles F. Strong, executive general agent of the Missouri Pacific at Harlingen, Tex., whose death on July 23 was reported in the *Railway Age* of August 4, was born at San Luis Potosi, Mexico, on September 13, 1901, and entered the service of the Missouri Pacific in 1924 as chief clerk to the general agent at San Antonio, Tex. With the consolidation of the International-Great Northern with the Missouri Pacific in 1925 he was appointed rate clerk in the consolidated offices and later he was promoted to soliciting freight agent. In 1927 Mr. Strong went to Harlingen as chief clerk to the general agent and one year later he was promoted to traffic representative, with the same headquarters, being transferred to Houston, Tex., in 1929. In July, 1930, he was advanced to commercial agent at Harlingen, and in May, 1940, he was promoted to general agent, with headquarters at Brownsville, Tex. One year later Mr. Strong was advanced to the position he held at the time of his death.

N. Y. C. SALUTE TO VETERANS.—Returning servicemen sailing up the Hudson river in New York are being greeted with a "Welcome—Well Done" sign, erected over the river front of the New York Central's West Shore station at Weehawken, N. J. The greeting measures 140 ft. in length and stands 16 ft. high in blue lettering on a white background. The river front of the station also has been painted red, white and blue across its 480 ft. width, with a decorative band of 13 large white stars near its cornice.

RECORD OF A 2-YEAR-OLD STATION.—More than 33,825,000 persons have passed through the Canadian National's Central station in Montreal, since its opening on July 14, 1943, according to A. A. Gardiner, general passenger traffic manager. Of this total 13,325,000 were passengers traveling on 71,830 trains. Busiest travel day in either year was June 29 last (the Friday before Dominion Day), when 28,105 passengers were handled. Next busiest days were the Fridays before Christmas and the Thursdays prior to Easter.

A further breakdown of the figures, according to Mr. Gardiner, reveals 1,043,421 meals served in the station restaurant, 190,310 to members of the armed forces; 3,250,000 pieces of luggage handled, and 170,000 telegrams sent from the station's telegraph office.

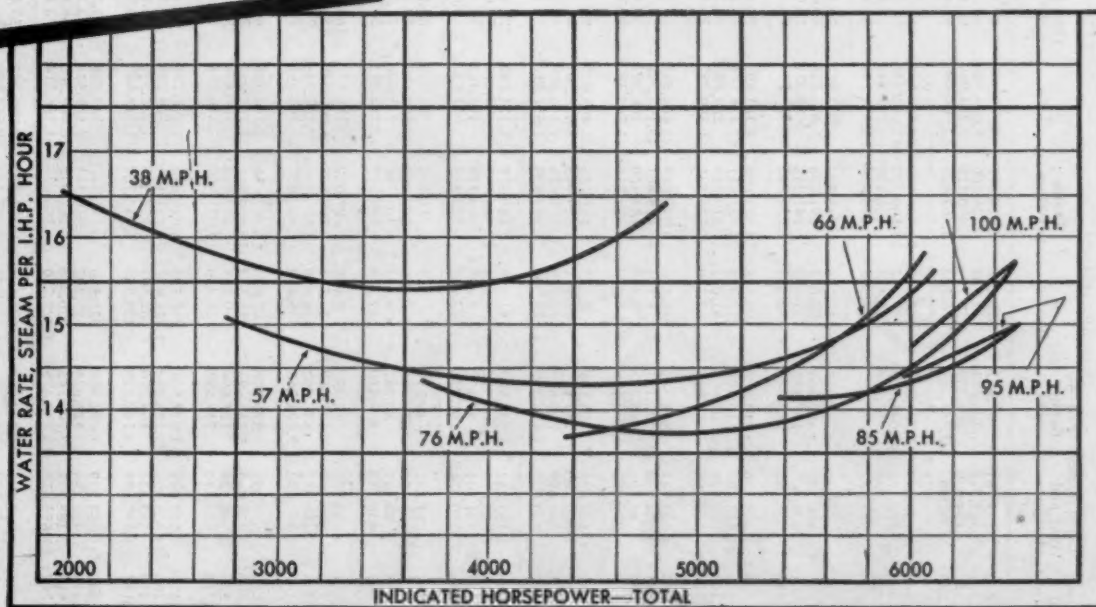
STEAM PER HORSEPOWER HOUR

The Franklin System of Steam Distribution

applied to

The Pennsylvania Railroad's

T-1 Locomotives



IN a paper read before the New York Railroad Club on May 17, 1945, describing the Pennsylvania Railroad's T-1 Locomotive, Chief Engineer Ralph P. Johnson of the Baldwin Locomotive works stated:

"The minimum water rate was 13.6 pounds at a speed of 76 miles per hour and 20 percent cut-off. In most of the tests the water rate was between 14 and 15.5 pounds.

"In 40 years of testing on the Altoona Test Plant, this locomotive gave the lowest water rate."



FRANKLIN RAILWAY SUPPLY COMPANY, INC.

NEW YORK • CHICAGO

In Canada: FRANKLIN RAILWAY SUPPLY COMPANY, LIMITED, MONTREAL

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF JUNE AND SIX MONTHS OF CALENDAR YEAR 1945

Name of road	Av. mileage operated during period	Operating revenues			Operating expenses			Operating ratio	Net from railway operation		Net railway operating income		
		Freight	Passenger	Total (inc. misc.)	Maintenance of Way and structures	Equipment	Traffic		Trans- portation	Total	Railway tax accruals	1945	1944
Alron, Canton & Youngtown.....	June 6 mos.	\$347,563	\$177	\$361,663	\$99,781	\$38,987	\$18,248	\$116,677	\$290,605	\$20,369	\$71,058	\$25,609	\$50,995
Alton	June 6 mos.	2,370,004	880	2,464,171	445,318	226,814	112,734	736,266	1,634,708	347,883	820,463	347,517	406,566
Alton	June 6 mos.	2,181,290	843,510	3,363,176	494,030	484,759	77,794	1,090,120	2,274,040	397,328	1,089,136	275,682	268,047
Alton	June 6 mos.	13,213,416	4,094,075	19,424,879	2,357,802	2,867,489	436,725	6,463,620	12,906,469	2,545,935	6,518,419	2,768,326	2,252,893
Atchison, Topeka & Santa Fe System.....	June 6 mos.	39,529,634	10,247,690	52,652,566	7,133,343	7,781,884	641,208	12,920,182	29,089,854	16,256,762	25,627,712	6,018,689	4,561,678
Atlanta & West Point	June 6 mos.	211,472,512	52,492,625	282,087,890	38,167,147	45,048,875	3,775,267	74,560,322	165,641,438	83,244,956	116,446,452	30,471,732	24,793,122
Atlanta & West Point	June 6 mos.	249,066	135,438	425,372	47,288	57,858	11,165	136,439	292,449	77,538	182,923	59,026	33,016
Atlanta & West Point	June 6 mos.	1,702,699	777,812	2,738,998	301,884	377,892	65,555	996,616	1,856,733	539,696	1,882,265	185,879	194,386
Western of Alabama	June 6 mos.	239,661	143,841	416,951	58,313	63,507	10,748	141,503	292,372	83,303	124,579	35,316	46,858
Atlanta, Birmingham & Coast	June 6 mos.	1,597,640	820,431	2,628,938	360,130	402,863	65,071	891,205	1,824,638	549,455	830,300	227,973	282,883
Atlanta, Birmingham & Coast	June 6 mos.	706,025	315,792	1,067,992	106,705	107,893	31,567	341,242	608,471	136,004	181,521	8,283	54,862
Atlanta, Birmingham & Coast	June 6 mos.	4,116,392	294,792	4,624,715	685,198	684,523	183,251	1,736,365	3,431,734	683,065	1,192,981	268,234	205,633
Atlantic Coast Line	June 6 mos.	7,345,754	3,339,083	11,387,739	1,965,129	2,313,808	199,558	3,873,698	8,761,493	1,700,000	2,626,246	645,105	1,263,262
Charleston & Western Carolina	June 6 mos.	52,362,163	20,938,405	78,099,439	11,023,296	13,710,408	1,217,428	24,027,611	52,838,576	17,600,000	25,662,611	5,154,681	8,634,238
Charleston & Western Carolina	June 6 mos.	343	192,190	181,111	319,198	67,695	11,062	119,319	284,806	25,000	6,339	86,557	86,557
Charleston & Western Carolina	June 6 mos.	1,992,496	99,854	2,145,711	362,164	388,088	63,360	746,331	1,599,297	270,000	546,414	245,558	470,142
Baltimore & Ohio	June 6 mos.	27,548,178	4,305,413	33,578,659	4,703,148	6,458,352	544,710	10,842,849	23,680,885	5,398,739	9,897,774	3,759,187	3,845,261
Staten Island Rapid Transit	June 6 mos.	158,891,790	24,997,226	193,938,913	25,004,820	39,237,181	3,178,111	66,955,861	140,911,208	26,562,611	53,747,705	22,958,343	22,909,775
Staten Island Rapid Transit	June 6 mos.	346,826	153,107	510,509	49,795	48,777	1,419	143,460	268,307	105,028	24,202	115,965	115,662
Staten Island Rapid Transit	June 6 mos.	2,042,796	831,533	2,934,152	296,882	290,588	8,320	992,910	1,742,380	443,439	1,191,772	553,901	647,072
Bangor & Aroostook	June 6 mos.	418,848	85,675	538,364	167,648	123,193	6,255	165,126	495,047	91,908	51,908	29,161	31,213
Bessemer & Lake Erie	June 6 mos.	5,312,144	420,012	5,936,282	1,065,860	787,412	37,811	1,529,945	3,626,601	1,642,477	690,552	833,502	833,502
Bessemer & Lake Erie	June 6 mos.	2,067,367	2,228	2,084,721	160,498	762,653	12,728	371,676	1,346,469	375,899	737,252	533,455	633,801
Bessemer & Lake Erie	June 6 mos.	8,472,855	14,430	8,576,479	860,023	4,476,379	79,605	1,957,820	7,617,517	925,825	958,962	1,463,627	1,695,840
Boston & Maine	June 6 mos.	4,588,461	1,791,571	7,043,905	1,135,143	1,221,580	84,239	2,480,377	5,171,780	772,966	1,872,125	832,393	986,343
Burlington, Rock Island	June 6 mos.	29,730,779	9,125,917	42,721,114	7,052,172	7,869,517	536,821	15,963,931	32,904,412	4,033,160	9,816,702	3,838,301	4,793,947
Burlington, Rock Island	June 6 mos.	249,617	81,531	351,112	31,141	37,127	3,475	103,779	191,465	8,368	159,647	93,826	46,212
Burlington, Rock Island	June 6 mos.	1,103,617	427,328	1,630,648	170,374	161,231	23,083	527,840	971,512	46,429	695,136	365,741	245,342
Cambria & Indiana	June 6 mos.	136,452	81,415	217,867	17,547	49,115	562	18,173	91,731	82,282	44,804	50,187	52,744
Canadian Pacific Lines in Maine	June 6 mos.	810,856	811,415	1,622,271	71,157	279,406	3,596	109,181	504,607	539,255	306,808	296,700	322,580
Canadian Pacific Lines in Maine	June 6 mos.	363,709	83,981	480,213	84,421	80,567	6,621	161,788	345,326	21,742	184,887	36,036	77,360
Canadian Pacific Lines in Maine	June 6 mos.	2,956,359	484,112	3,625,205	436,188	467,420	39,774	1,146,549	2,155,481	133,739	1,469,724	826,314	1,044,832
Canadian Pacific Lines in Vermont	June 6 mos.	78,098	15,016	105,454	52,722	28,050	2,401	87,027	175,822	10,700	70,368	116,566	90,331
Central of Georgia	June 6 mos.	509,828	98,748	681,337	221,090	185,069	14,511	609,525	1,060,290	61,957	73,953	666,017	547,097
Central of Georgia	June 6 mos.	2,266,241	726,507	3,282,288	446,835	636,522	74,839	1,175,268	2,477,744	262,142	804,544	345,938	354,894
Central of Georgia	June 6 mos.	14,111,434	4,379,642	20,462,141	2,781,792	3,694,045	435,410	7,682,613	15,461,265	1,582,722	5,000,876	3,074,985	3,051,058
Central of New Jersey	June 6 mos.	4,191,406	617,559	5,008,168	555,231	671,398	60,080	1,892,611	3,552,235	615,648	1,545,933	698,985	498,570
Central Vermont	June 6 mos.	24,741,386	3,478,244	30,119,807	2,979,880	5,131,693	355,524	12,050,306	21,771,044	3,495,382	8,339,783	3,421,055	2,270,476
Central Vermont	June 6 mos.	540,688	67,000	627,326	108,680	127,848	6,108	312,812	580,834	38,347	95,422	1,234	58,077
Central Vermont	June 6 mos.	3,356,200	432,000	4,120,310	637,740	749,591	58,450	2,021,829	3,466,305	171,232	474,005	42,969	373,043
Chesapeake & Ohio	June 6 mos.	15,689,847	1,774,378	18,174,169	2,558,305	3,837,504	237,534	5,016,219	12,242,288	3,850,260	2,632,439	2,825,826	2,825,826
Chicago & Eastern Illinois	June 6 mos.	93,536,874	9,140,171	106,306,706	13,968,466	23,586,262	1,537,417	30,131,490	72,564,239	16,075,634	33,742,387	16,075,634	19,675,634
Chicago & Eastern Illinois	June 6 mos.	1,353,560	604,066	2,756,410	333,334	469,976	67,603	958,986	1,931,355	362,800	825,054	223,159	144,838
Chicago & Eastern Illinois	June 6 mos.	11,213,205	3,388,036	16,001,152	1,897,676	2,742,725	445,968	5,644,526	11,349,520	1,978,600	4,651,632	1,513,680	1,966,997
Chicago & Illinois Midland	June 6 mos.	601,226	238	632,506	69,829	88,904	21,810	141,447	349,388	196,025	283,118	92,279	97,958
Chicago & North Western	June 6 mos.	3,164,303	3,506	3,330,476	428,284	536,694	137,392	840,243	2,109,594	771,932	1,220,882	487,156	495,073
Chicago & North Western	June 6 mos.	5,552,330	3,531,684	14,960,816	2,188,821	2,702,245	220,346	4,767,847	10,409,005	2,525,292	2,086,106	2,040,946	2,040,946
Chicago & North Western	June 6 mos.	17,932,094	83,662,772	11,653,676	16,237,493	1,328,770	28,563,033	61,186,214	11,850,393	11,777,490	11,455,437	11,850,393	11,850,393
Chicago, Burlington & Quincy	June 6 mos.	16,585,664	2,953,517	21,292,995	3,838,041	2,802,799	283,561	5,209,217	12,699,382	5,978,830	2,373,952	1,625,002	1,625,002
Chicago Great Western	June 6 mos.	97,479,862	17,578,308	125,460,440	17,612,779	17,543,782	1,739,234	30,337,729	70,562,988	37,128,181	54,893,432	12,665,368	12,665,368
Chicago Great Western	June 6 mos.	2,039,470	292,334	2,520,733	411,571	339,071	905,488	905,488	1,797,351	235,572	353,577	235,989	235,989
Chicago Great Western	June 6 mos.	12,734,806	1,276,077	15,160,254	2,298,101	2,025,080	392,589	5,600,917	10,760,000	2,035,290	4,400,252	1,457,198	1,661,581
Chicago, Indianapolis & Louisville	June 6 mos.	787,184	65,272	909,195	128,700	198,814	34,056	308,098	704,916	47,967	204,278	107,513	192,578
Chicago, Indianapolis & Louisville	June 6 mos.	5,547,454	412,003	6,365,842	700,588	1,152,941	204,222	2,408,772	4,330,231	558,955	1,150,280	1,482,478	1,482,478

Table continued next left-hand page

Railway Age—August 11, 1945

for top operating efficiency

To keep the "Big Boy", as well as smaller locomotives, at top operating efficiency, a complete brick arch should be maintained in the firebox at all times, so as to develop a maximum amount of steam from the fuel burned.

For thirty-six years Security Sectional Arches have been saving fuel on all types of locomotives, and the harder a locomotive is worked, the greater the proportional fuel saving.



**HARBISON-WALKER
REFRACTORIES CO.**
Refractories Specialists



AMERICAN ARCH CO. INC.
60 East 42nd Street, New York 17, N. Y.
Locomotive Combustion Specialists

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF JUNE AND SIX MONTHS OF CALENDAR YEAR 1945—CONTINUED

Name of road	Av. mileage operated during period	Operating revenues			Operating expenses			Operating ratio	Net from operation	Net railway operating income	
		Freight	Passenger	Total (inc. misc.)	Maintenance of way and structures	Equipment	Traffic			Railway tax accruals	1945
Chicago, Milwaukee, St. Paul & Pacific	June 10,730	\$16,175,789	\$3,449,502	\$21,600,999	\$5,224,061	\$3,231,147	\$92,180	72.7	\$5,895,419	\$1,153,000	\$2,492,893
6 mos.	10,723	88,022,389	15,698,135	103,720,524	21,114,218	19,081,441	1,821,797	73.1	30,987,659	5,482,000	14,684,242
June	7,753	12,408,973	3,711,057	16,120,030	2,818,208	2,370,870	353,330	62.9	6,442,080	3,494,020	2,497,630
Chicago, Rock Island & Pacific	June 7,749	12,017,384	20,217,106	32,234,490	13,293,951	13,966,654	2,104,480	61.6	38,222,506	21,171,246	14,013,432
6 mos.	7,749	12,017,384	20,217,106	32,234,490	13,293,951	13,966,654	2,104,480	61.6	38,222,506	21,171,246	14,013,432
Chicago, St. Paul, Minneapolis & Omaha	June 1,617	1,690,742	421,408	2,112,150	370,601	355,229	40,538	75.5	570,512	196,886	268,772
6 mos.	1,617	10,103,280	2,113,725	12,217,005	1,928,854	2,013,746	245,211	76.0	3,208,286	1,168,875	1,693,343
June	302	1,213,116	12,915	1,226,031	104,189	204,563	22,308	49.4	624,333	132,433	152,433
Clinchfield	June 302	7,214,524	63,208	7,277,732	583,636	1,180,705	135,455	49.7	3,686,198	796,008	3,031,231
6 mos.	302	7,214,524	63,208	7,277,732	583,636	1,180,705	135,455	49.7	3,686,198	796,008	3,031,231
Colorado & Southern	June 748	1,127,779	264,172	1,391,951	1,493,456	220,508	18,441	66.2	505,175	214,070	225,948
6 mos.	748	5,683,149	1,578,160	7,261,309	7,882,879	1,149,557	107,447	67.5	2,565,469	1,000,417	1,251,880
June	804	1,135,206	457,363	1,592,569	342,721	213,195	27,290	63.3	626,523	643,665	111,958
Fort Worth & Denver City	June 804	5,044,285	2,438,417	7,482,702	1,928,686	1,216,471	163,919	70.9	2,365,581	1,401,906	729,267
6 mos.	804	5,044,285	2,438,417	7,482,702	1,928,686	1,216,471	163,919	70.9	2,365,581	1,401,906	729,267
Colorado & Wyoming	June 42	74,418	124,729	199,147	23,558	17,249	740	73.6	32,863	18,200	14,550
6 mos.	42	469,225	779,022	1,248,247	81,916	120,100	4,857	68.6	244,612	129,749	115,959
June	168	130,873	150,609	281,482	38,698	17,051	8,857	81.8	27,439	18,595	11,061
Columbus & Greenville	June 168	752,392	55,590	807,982	203,964	116,911	28,028	83.9	137,761	97,095	52,734
6 mos.	168	752,392	55,590	807,982	203,964	116,911	28,028	83.9	137,761	97,095	52,734
Delaware & Hudson	June 846	3,812,701	197,428	4,010,129	538,412	1,071,066	48,304	75.8	998,188	476,478	471,569
6 mos.	846	22,491,062	1,080,576	23,571,638	3,005,747	3,389,217	293,644	79.1	5,061,779	2,087,374	2,607,395
June	973	5,140,908	973,518	6,114,426	862,479	1,129,420	118,635	72.1	1,884,882	2,512,633	2,731,319
Delaware, Lackawanna & Western	June 973	29,151,773	3,304,091	32,455,864	4,595,065	6,618,783	693,379	77.8	8,434,300	5,451,633	2,006,763
6 mos.	973	29,151,773	3,304,091	32,455,864	4,595,065	6,618,783	693,379	77.8	8,434,300	5,451,633	2,006,763
Denver & Rio Grande Western	June 2,386	6,210,822	1,032,408	7,243,230	773,300	1,077,753	101,347	54.5	3,433,041	1,760,975	1,542,167
6 mos.	2,386	32,235,416	4,634,866	36,870,282	3,975,328	6,236,725	598,785	60.6	15,413,108	7,510,787	7,063,907
June	232	2,282,233	8,942	2,291,175	287,059	331,633	20,107	82.5	278,477	30,752	65,006
Denver & Salt Lake	June 232	4,364,364	50,420	4,414,784	267,059	331,633	20,107	81.1	278,477	179,392	420,839
6 mos.	232	4,364,364	50,420	4,414,784	267,059	331,633	20,107	81.1	278,477	179,392	420,839
Detroit & Mackinac	June 230	64,822	11,274	76,096	23,086	15,847	566	89.1	9,145	3,942	2,164
6 mos.	230	372,183	60,079	432,262	120,446	96,784	4,821	90.4	46,062	26,006	1,310
June	50	328,276	5,000	333,276	43,209	30,861	10,374	57.6	139,939	36,077	49,179
Detroit & Toledo Shore Line	June 50	2,291,742	2,301,362	4,593,104	218,429	178,410	62,603	49.6	1,160,682	435,669	347,470
6 mos.	50	2,291,742	2,301,362	4,593,104	218,429	178,410	62,603	49.6	1,160,682	435,669	347,470
Detroit, Toledo & Ironton	June 464	596,134	1,716	600,850	98,981	126,398	14,838	74.6	158,936	76,095	89,098
6 mos.	464	4,664,064	8,736	4,672,800	573,090	1,287,801	284,737	58.5	2,018,777	897,652	1,114,145
June	546	4,634,334	5,589	4,639,923	393,850	540,480	4,459	35.6	3,471,393	1,583,567	1,888,950
Duluth, Missabe & Iron Range	June 546	1,642,728	31,093	1,673,821	2,237,846	3,332,187	29,964	59.5	6,396,495	3,167,467	3,309,177
6 mos.	546	1,642,728	31,093	1,673,821	2,237,846	3,332,187	29,964	59.5	6,396,495	3,167,467	3,309,177
Duluth, Winnipeg & Pacific	June 175	230,000	3,100	233,100	50,995	29,369	2,348	72.3	65,814	19,019	16,188
6 mos.	175	1,332,000	14,400	1,346,400	279,844	185,219	14,397	77.8	305,631	111,240	29,852
June	392	2,152,874	2,257,599	4,410,473	339,010	808,315	17,617	86.7	341,670	214,260	76,455
Elgin, Joliet & Eastern	June 392	15,681,661	292	15,681,953	1,629,366	4,662,394	104,382	71.6	5,146,288	2,402,750	2,248,001
6 mos.	392	15,681,661	292	15,681,953	1,629,366	4,662,394	104,382	71.6	5,146,288	2,402,750	2,248,001
Erie	June 2,243	11,288,468	1,222,379	12,510,847	1,426,539	2,228,896	227,193	67.5	4,350,197	1,967,273	1,775,434
6 mos.	2,243	64,939,369	5,556,438	70,495,807	7,493,474	13,616,177	1,423,090	73.0	20,359,974	7,489,063	8,616,139
June	682	877,595	1,116,809	1,994,404	325,850	338,584	56,566	70.5	640,755	201,504	357,922
Florida East Coast	June 682	8,601,475	7,168,154	15,769,629	2,030,412	1,912,874	334,518	58.1	7,180,156	3,411,169	3,075,571
6 mos.	682	8,601,475	7,168,154	15,769,629	2,030,412	1,912,874	334,518	58.1	7,180,156	3,411,169	3,075,571
Georgia Railroad	June 328	589,622	175,665	765,287	82,937	140,159	22,748	73.9	210,654	33,011	184,703
6 mos.	328	3,713,648	865,125	4,578,773	613,410	807,064	134,833	74.5	1,235,906	197,951	1,037,631
June	408	1,950,902	3,715	1,954,617	206,531	27,654	10,969	82.4	36,366	11,077	15,495
Georgia & Florida	June 408	1,094,390	30,973	1,125,363	294,279	171,909	64,636	85.5	167,531	65,849	43,315
6 mos.	408	1,094,390	30,973	1,125,363	294,279	171,909	64,636	85.5	167,531	65,849	43,315
Grand Trunk Western	June 1,026	2,533,000	374,000	2,907,000	3,098,000	509,062	36,939	81.0	589,954	182,581	338,683
6 mos.	1,026	15,580,000	1,837,000	17,417,000	3,205,254	3,145,657	224,047	78.6	3,979,888	1,226,558	2,465,733
June	172	186,000	15,900	201,900	42,629	21,459	2,264	81.0	41,960	21,189	21,833
Canadian National Lines in New England	June 172	986,800	55,600	1,042,400	289,753	177,704	13,625	103.3	—39,297	127,134	—410,033
6 mos.	172	986,800	55,600	1,042,400	289,753	177,704	13,625	103.3	—39,297	127,134	—410,033
Great Northern	June 8,372	17,592,656	1,913,031	19,505,687	3,216,169	3,211,729	228,305	56.9	9,035,769	5,758,609	3,025,566
6 mos.	8,372	82,271,120	9,196,181	91,467,301	16,913,042	19,271,320	1,428,581	80.9	30,634,581	19,671,337	11,172,137
June	234	1,356,602	2,990	1,359,592	400,805	136,634	50,737	79.0	288,444	196,558	52,463
Green Bay & Western	June 234	1,356,602	2,990	1,359,592	400,805	136,634	50,737	79.0	288,444	196,558	52,463
6 mos.	234	1,356,602	2,990	1,359,592	400,805	136,634	50,737	79.0	288,444	196,558	52,463
Gulf & Ship Island	June 259	214,686	62,918	277,604	56,348	24,607	2,756	65.5	103,035	65,139	21,450
6 mos.	259	1,238,740	258,570	1,497,310	301,939	173,326	16,962	69.3	507,093	161,443	251,168
6 mos.	259	1,238,740	258,570	1,497,310	301,939	173,326	16,962	69.3	507,093	161,443	251,168

The *Superheater* for *Today's* and *Tomorrow's* Locomotives—



Elesca

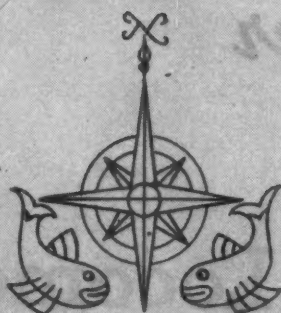
represents 34 years
of progressive development

**THE
SUPERHEATER
COMPANY**

Representative of AMERICAN THROTTLE COMPANY, INC.
60 East 42nd Street, NEW YORK
122 S. Michigan Ave. CHICAGO
Montreal, Canada. THE SUPERHEATER COMPANY, LTD.



Superheaters • Superheater Pyrometers • Exhaust Steam Injectors • Steam Dryers • Feedwater Heaters • American Throttles



You can find ALCO Locomotives in any part of the Globe

ALCO recently delivered six narrow-gauge, mountain-type steam locomotives to the Paraná Santa Catarina Railroad of Brazil. This road is a vital link between the rail systems of the south and the roads serving the industrial center of São Paulo—sometimes called the "Chicago of Brazil."

The chief freight of the line is coal, and hauling it to the great industries in São Paulo is an important part of the

Brazilian National Defense Program.

ALCO locomotives are in every type of service, and serving in all parts of the world. Whether they are steam, Alco-G. E., diesel-electric, or straight electric; whether they burn oil, coal or wood—the important thing about ALCO locomotives is their economy of performance.

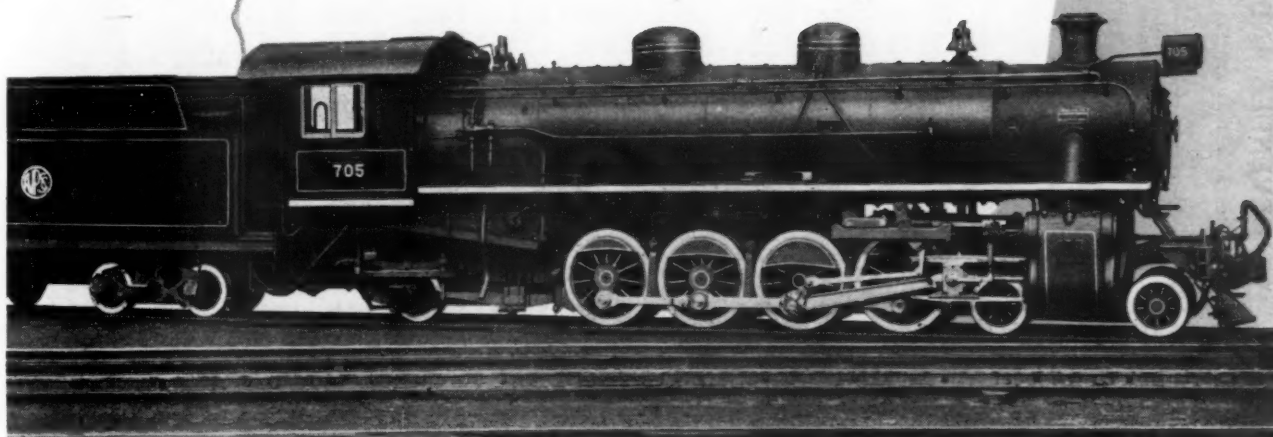
They're *right* for the job because they are built for the job.

American Locomotive



THE MARK OF MODERN LOCOMOTION

B R A Z I L



Paraná Santa Catarina's Alco-built 4-8-2 type locomotives burn wood. Although the chief freight of the line is coal, the conservation of coal deposits is imperative. And the abundance of wood in the region makes wood the logical and economical fuel for locomotive use.

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF JUNE AND SIX MONTHS OF CALENDAR YEAR 1945—CONTINUED

Name of road	Av. mileage operated during period	Operating revenues			Operating expenses			Operating ratio	Net from railway operation	Net railway operating income		
		Freight	Passenger	Total (inc. misc.)	Way and structures	Maintenance of Equip-ment	Traffic			Trans- portation	Total	Railway tax accruals	1945	1944
Gulf, Mobile & Ohio	June 1,941	\$2,945,887	\$305,086	\$3,350,973	\$510,024	\$584,679	\$90,247	65.8	\$1,151,880	\$598,760	\$341,212	\$450,231
Illinois Central	6 mos. 1,943	18,007,607	1,236,668	19,244,275	3,249,382	3,200,846	518,983	63.4	7,224,646	4,135,454	2,250,063	2,369,240
Illinois Central	June 4,822	15,330,340	3,222,214	18,552,554	3,028,593	3,320,421	217,894	63.0	7,371,407	4,437,914	2,667,564	2,466,601
Illinois Central	6 mos. 4,823	87,785,301	16,178,975	103,964,276	15,063,263	19,754,164	1,310,200	64.8	39,034,911	24,261,015	13,381,639	14,054,795
Yazoo & Mississippi Valley	June 1,524	1,496,194	350,317	1,846,511	445,763	399,482	37,397	92.6	145,172	276,415	243,366	200,975
Illinois Central System	6 mos. 6,346	14,875,375	1,986,693	16,862,068	3,049,291	2,037,640	226,226	62.8	6,631,233	3,924,115	2,080,179	2,084,418
Illinois Central System	June 6,347	17,026,534	3,572,531	20,599,065	3,474,356	3,719,903	255,491	65.7	7,516,579	4,721,574	2,431,111	2,403,489
Illinois Central System	6 mos. 6,347	102,660,676	18,165,668	120,826,344	18,112,554	21,791,804	1,536,426	64.5	45,666,144	28,220,205	15,497,295	16,167,691
Illinois Terminal	June 476	706,213	183,180	889,393	120,490	113,790	19,988	58.91	396,271	233,852	117,795	64,698
Kansas City Southern	June 890	4,542,828	1,040,961	5,583,789	627,669	700,086	120,815	56.79	2,608,423	1,732,351	724,777	667,332
Kansas City Southern	June 890	3,062,886	329,298	3,392,184	487,344	381,709	63,368	56.0	1,581,722	775,000	530,096	479,047
Kansas City Southern	6 mos. 890	17,622,887	1,611,601	19,234,488	2,532,326	2,715,998	389,225	57.8	8,645,660	4,310,000	3,107,041	2,836,191
Kansas, Oklahoma & Gulf	June 328	444,690	1,949	453,148	44,668	25,062	10,494	39.7	273,386	115,207	127,385	86,495
Lake Superior & Inland	June 156	2,608,100	11,148	2,619,248	283,731	158,664	59,969	64.3	1,220,530	540,648	537,552	489,437
Lake Superior & Inland	June 156	995,247	781	1,000,028	159,577	201,139	3,577	66.5	1,581,722	775,000	530,096	479,047
Lake Superior & Inland	6 mos. 156	9,952,247	781	10,000,028	1,595,577	2,011,139	35,777	62.5	4,447,491	2,923,304	211,461	196,795
Lehigh & Hudson River	June 96	251,720	Dr. 999	251,720	50,336	37,431	5,571	69.5	76,833	40,092	21,583	21,660
Lehigh & Hudson River	June 96	1,675,430	Dr. 994	1,675,430	30,188	25,403	3,526	64.3	599,001	291,268	152,083	152,508
Lehigh & New England	June 190	556,879	.....	556,879	138,343	77,527	187,707	66.5	187,503	88,205	125,062	114,323
Lehigh & New England	6 mos. 190	2,692,110	.....	2,692,110	297,823	788,676	47,370	79.8	545,729	271,675	414,862	652,182
Lehigh Valley	June 1,260	5,709,338	707,165	6,416,503	858,192	1,210,519	124,367	73.4	1,817,778	1,491,322	40,663	1,000,783
Louisiana & Arkansas	June 834	3,535,222	3,746,512	7,281,734	5,910,876	7,692,315	738,759	79.2	8,710,317	3,974,517	1,923,112	5,153,292
Louisiana & Arkansas	June 834	1,680,703	147,778	1,828,481	317,601	189,003	34,329	52.0	902,120	566,537	252,868	203,298
Louisiana & Arkansas	6 mos. 834	9,676,065	872,402	10,548,467	1,920,868	1,919,777	208,551	55.0	4,900,647	3,069,562	1,370,002	1,045,728
Louisville & Nashville	June 4,755	13,440,177	3,334,901	16,775,078	1,941,583	3,139,495	237,841	64.6	6,305,487	4,470,408	2,104,553	2,139,657
Maine Central	June 4,755	81,050,063	19,502,401	100,552,464	11,463,614	18,335,470	1,330,917	63.1	39,455,909	28,720,375	12,698,367	12,447,950
Maine Central	June 988	1,108,497	370,529	1,479,026	470,866	301,133	11,597	85.8	2,229,652	1,149,916	116,808	117,187
Maine Central	6 mos. 988	8,194,660	1,612,603	9,807,263	2,017,278	1,905,050	83,620	76.6	2,452,383	1,205,395	956,299	961,736
Midland Valley	June 334	139,764	34	140,104	31,004	16,221	2,474	70.3	42,144	14,701	17,340	12,683
Minneapolis & St. Louis	June 1,408	833,797	327	834,124	160,113	84,070	15,262	66.8	281,714	94,523	133,165	114,986
Minneapolis & St. Louis	June 1,408	1,666,711	55,184	1,721,895	300,909	214,464	67,108	80.3	250,526	133,896	78,553	220,640
Minneapolis & St. Louis	6 mos. 1,408	7,107,903	226,659	7,334,562	1,448,634	1,222,711	391,718	75.6	1,864,651	1,045,483	844,467	945,116
Minneapolis, St. Paul & Sault Ste. Marie	June 3,224	2,323,459	176,543	2,500,002	485,981	439,505	42,140	71.4	762,547	371,294	428,704	537,481
Duluth, South Shore & Atlantic	June 550	10,029,164	875,244	10,904,408	2,241,309	2,292,958	235,136	84.7	1,810,795	1,197,055	951,414	48,876
Duluth, South Shore & Atlantic	June 550	1,866,952	121,586	1,988,538	394,115	365,709	67,599	80.1	425,772	102,341	308,272	366,230
Spokane International	June 152	176,097	4,489	180,586	39,717	16,137	3,076	58.6	78,500	41,133	25,924	14,998
Mississippi Central	June 152	1,059,243	27,421	1,086,664	27,421	27,421	19,548	58.6	480,146	270,074	141,662	118,215
Mississippi Central	June 152	1,652,545	7,422	1,659,967	26,380	20,260	7,115	60.5	68,698	24,329	31,099	29,338
Mississippi Central	6 mos. 152	9,490,265	21,524	9,511,789	200,808	112,122	24,345	65.8	342,297	121,478	148,405	200,516
Missouri & Arkansas	June 365	179,353	1,914	181,267	91,064	32,036	7,752	123.4	44,266	7,513	83,163	11,563
Missouri-Illinois	June 365	1,774,249	12,330	1,786,579	422,919	154,639	542,927	97.9	26,186	48,803	208,719	100,280
Missouri-Illinois	June 172	296,676	505	297,181	47,550	36,700	4,152	57.3	127,533	88,905	33,689	34,929
Missouri-Illinois	6 mos. 172	1,701,268	2,881	1,704,149	245,718	228,563	26,899	55.2	767,090	529,947	221,744	183,709
Missouri-Kansas-Texas Lines	June 3,253	6,253,208	1,182,580	7,435,788	1,816,027	879,713	143,047	65.0	2,784,932	1,852,735	511,700	393,343
Missouri-Kansas-Texas Lines	June 3,253	35,817,186	5,982,270	41,800,456	9,848,581	5,219,700	896,665	66.6	15,112,839	8,953,600	3,755,195	3,673,804
Missouri Pacific	June 7,082	14,700,875	2,752,353	17,453,228	2,436,200	2,819,027	311,410	61.2	7,454,399	4,348,586	2,252,043	2,348,250
Missouri Pacific	6 mos. 7,082	88,515,780	16,698,111	105,213,891	13,046,199	16,488,069	1,832,310	58.9	46,752,276	26,193,124	16,399,202	15,982,550
Gulf Coast Lines	June 1,734	2,781,389	320,886	3,102,275	632,177	387,127	49,317	65.5	1,118,751	.....	344,731	519,881
International-Great Northern	June 1,734	2,987,260	1,813,071	4,800,331	3,741,040	2,221,279	330,298	51.6	1,972,686	.....	3,432,751	4,014,207
International-Great Northern	June 1,110	1,876,850	540,517	2,417,367	468,720	361,134	36,843	68.8	827,171	316,375	311,935	291,677
International-Great Northern	6 mos. 1,110	10,788,366	3,765,005	14,553,371	2,739,468	2,090,915	223,123	70.7	4,398,752	1,515,790	1,836,748	1,736,306
Monongahela	June 170	565,298	2,181	567,479	71,443	51,142	611	47.0	302,143	92,415	110,564	113,248
Monongahela	June 170	2,981,471	13,022	3,004,493	410,591	285,365	3,888	52.1	1,443,516	553,612	351,295	747,426

REVENUES AND EXPENSES OF RAILWAYS

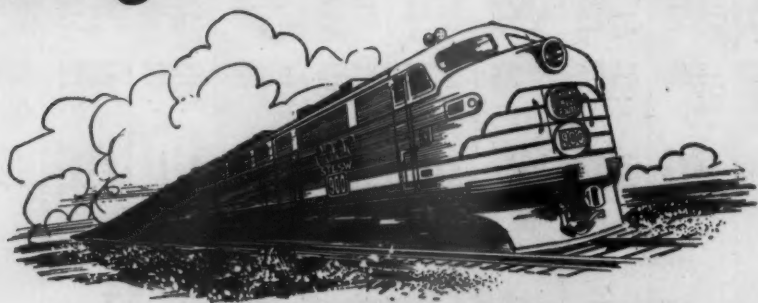
REVENUES AND EXPENSES OF RAILWAYS

MONTH OF JUNE AND SIX MONTHS OF CALENDAR YEAR 1945—CONTINUED

Name of road	Av. mileage operated during period	Operating revenues			Operating expenses			Operating ratio	Net from railway operation	Railway operating income	
		Freight	Passenger	Total	Way and structures	Equip-ment	Traffic			Trans-portion	Total
Montour	June 51	\$309,869	.....	\$309,862	\$30,020	\$63,330	\$898	58.9	\$127,287	\$80,089	\$86,795
Nashville, Chattanooga & St. Louis	June 1,071	1,417,776	.....	1,417,776	112,791	350,473	6,085	68.1	454,995	334,290	\$86,795
	6 mos. 1,071	16,159,494	2,985,420	20,622,771	3,052,466	7,043,733	53,148	76.2	5,779,773	3,446,388	\$86,795
New York Central	June 10,749	39,178,559	16,187,718	61,635,757	8,711,230	10,807,290	742,711	71.1	17,828,412	10,236,451	\$86,795
Pittsburgh & Lake Erie	June 10,749	228,920,116	81,486,331	344,229,850	50,085,174	65,965,766	4,400,782	77.6	78,601,161	39,186,939	\$86,795
	6 mos. 229	2,868,482	117,945	3,086,759	400,559	965,766	44,908	79.2	630,358	3,027,346	\$86,795
New York, Chicago & St. Louis	June 1,687	4,452,428	316,003	7,928,388	1,018,967	1,886,619	154,257	65.7	2,723,196	438,583	\$86,795
New York, New Haven & Hartford	June 1,838	7,407,029	6,233,124	15,294,880	1,984,753	2,473,183	946,874	68.4	17,474,918	5,353,781	\$86,795
	6 mos. 1,838	45,845,503	36,746,366	89,622,448	10,865,955	14,371,728	911,599	69.9	27,015,923	10,485,000	\$86,795
New York Connecting	June 21	196,980	.....	216,975	47,110	11,132	.....	49.5	109,615	56,264	\$86,795
New York, Ontario & Western	June 21	1,250,473	36,288	807,897	90,186	92,456	21,925	54.2	639,159	51,785	\$86,795
	6 mos. 548	3,702,715	63,680	4,170,700	568,095	875,161	134,696	79.8	1,405,497	250,081	\$86,795
New York, Susquehanna & Western	June 120	32,653	39,466	400,446	34,169	38,881	4,307	56.9	174,620	52,293	\$86,795
Norfolk & Western	June 120	2,164,876	237,154	2,486,750	209,456	212,580	30,339	53.5	1,008,070	318,288	\$86,795
	6 mos. 2,161	11,027,931	1,287,445	12,678,511	1,474,287	2,479,426	175,334	57.2	5,178,961	3,058,361	\$86,795
Norfolk Southern	June 727	735,120	28,220	781,082	153,670	90,713	32,375	70.7	228,690	93,766	\$86,795
Northern Pacific	June 6,873	10,937,829	1,236,915	13,980,276	2,147,925	2,688,521	186,582	79.1	836,324	321,397	\$86,795
	6 mos. 6,869	57,524,893	9,351,092	72,970,408	11,990,331	15,644,936	1,143,919	75.2	18,102,913	10,652,322	\$86,795
Northwestern Pacific	June 331	501,680	19,010	581,384	146,190	62,722	2,378	71.1	159,097	26,582	\$86,795
Oklahoma City-Atoka	June 132	86,538	107,402	310,985	1,001,171	360,266	16,424	70.5	639,456	159,522	\$86,795
	6 mos. 132	652,752	1,596	661,014	139,801	27,104	7,263	55.0	297,301	114,950	\$86,795
Pennsylvania	June 10,112	56,014,852	22,096,347	84,755,776	10,128,127	15,765,896	1,109,151	74.4	21,735,435	11,446,327	\$86,795
Long Island	June 10,112	32,844,848	123,275,302	494,597,157	56,607,827	92,076,444	6,269,009	76.5	116,294,597	58,048,765	\$86,795
	6 mos. 376	1,114,085	2,901,508	4,223,195	515,398	549,105	26,279	66.4	1,418,417	883,706	\$86,795
Pennsylvania-Reading Seashore Lines	June 392	463,637	651,604	1,153,976	167,165	75,227	11,782	65.5	398,390	130,311	\$86,795
Pere Marquette	June 1,949	4,176,267	356,072	4,793,120	913,857	884,867	84,002	78.4	1,034,556	369,693	\$86,795
	6 mos. 1,949	26,006,769	1,667,220	28,876,045	4,799,629	5,261,066	490,504	76.1	6,913,787	2,407,915	\$86,795
Pittsburgh & Shawmut	June 97	138,518	.....	139,228	24,259	23,290	1,632	67.0	45,930	4,096	\$86,795
Pittsburgh & West Virginia	June 97	728,539	.....	728,539	146,698	138,668	10,737	74.6	186,337	35,889	\$86,795
	6 mos. 136	558,221	60	605,098	123,627	113,357	23,507	72.3	167,355	22,423	\$86,795
Pittsburgh, Shawmut & Northern	June 136	3,898,088	104	4,007,007	586,592	650,958	146,816	63.3	1,462,719	379,481	\$86,795
Reading	June 190	96,975	.....	98,071	24,666	18,229	1,155	91.2	6,627	6,515	\$86,795
	6 mos. 1,367	8,677,014	903,699	10,077,469	1,347,374	2,131,207	84,073	69.7	3,038,863	1,600,206	\$86,795
	6 mos. 1,567	49,619,289	5,355,719	57,569,135	7,205,214	12,252,340	521,643	71.9	16,186,022	8,751,425	\$86,795
Richmond, Fredericksburg & Potomac	June 118	1,537,852	1,175,445	2,957,007	290,812	362,705	14,770	53.2	1,383,790	1,053,828	\$86,795
Retland	June 118	9,635,500	6,856,600	18,053,877	1,558,503	2,073,543	88,135	52.1	8,642,893	6,563,503	\$86,795
	6 mos. 407	348,338	60,594	486,417	62,613	78,266	12,948	80.8	93,273	25,756	\$86,795
	6 mos. 407	1,747,051	346,133	2,519,532	395,784	525,665	76,179	97.1	72,097	160,813	\$86,795
St. Louis-San Francisco	June 4,645	7,385,114	1,842,852	9,976,867	1,320,238	1,781,320	170,019	65.0	3,188,881	1,735,328	\$86,795
	6 mos. 4,646	43,211,551	10,493,059	58,262,166	7,472,566	10,193,748	1,012,748	67.5	18,915,447	10,179,058	\$86,795
St. Louis, San Francisco & Texas	June 160	318,318	33,654	361,901	33,097	32,829	3,566	65.9	159,519	90,385	\$86,795
	6 mos. 160	1,670,639	229,219	1,959,082	206,543	197,772	70,416	65.9	766,009	389,757	\$86,795

IT'S A GREAT NEW DAY FOR RAILROADING

**It makes
little difference
to a
General Motors
Diesel
freight locomotive!**



GENERAL MOTORS
LOCOMOTIVES

IT'S A GREAT NEW DAY FOR RAILROADING

Denver & Rio Grande

Western's 540

over mountainous terrain

rolled up

337,728 miles between

January 1942 and January 1945.

Average availability 83.7%.

Average miles per month 9,650.

St. Louis & Southwestern's 900

over flat country rolled up

66,998 miles between

June 1944 and January 1945.

Average availability 89.3%.

Average miles per month 11,166.

It makes little difference—

over mountains or on the level.

ON TO FINAL VICTORY ★ BUY MORE WAR BONDS

ELECTRO-MOTIVE DIVISION

GENERAL MOTORS CORPORATION

LA GRANGE, ILL.

REVENUES AND EXPENSES OF RAILWAYS

MONTH OF JUNE AND SIX MONTHS OF CALENDAR YEAR 1945—CONTINUED

Name of road	Av. mileage operated during period	Operating revenues			Operating expenses			Operating ratio	Net from railway operation	Net railway operating income		
		Freight	Passenger (inc. misc.)	Total	Maintenance of way and structures	Equipment	Traffic			Trans- portation	Total	Railway tax accruals	1945	1944
St. Louis Southwestern Lines	June	\$5,744,681	\$272,439	\$6,017,120	\$629,133	\$642,848	\$105,173	\$1,377,982	\$2,892,006	\$1,994,951	\$882,523	\$881,530
6 mos.	1,607	35,996,247	1,682,637	37,678,884	3,717,452	3,787,018	631,175	8,365,874	17,333,935	13,214,585	5,686,331	4,772,107
Seaboard Air Line	June	4,168	6,782,382	10,549,816	1,528,552	1,899,036	239,968	3,273,986	7,412,782	1,400,000	1,478,645	1,792,029
6 mos.	4,171	46,424,053	19,248,135	65,672,188	9,386,736	11,606,093	1,496,808	21,447,902	46,822,789	11,090,000	9,714,346	11,628,109
Southern Railway	June	6,505	15,787,936	4,362,632	21,150,568	2,735,979	3,728,719	264,751	13,375,761	5,525,329	2,292,311	2,635,375
6 mos.	6,505	97,415,195	30,044,126	127,459,321	16,064,962	21,561,031	1,589,282	3,673,789	80,922,635	36,228,963	16,412,480	16,565,960
Alabama Great Southern	June	315	1,257,270	350,195	1,689,513	178,813	322,278	27,698	1,144,902	390,867	96,408	127,334
6 mos.	315	7,842,144	2,514,416	11,084,230	1,163,642	1,927,088	166,037	3,320,077	6,956,239	2,868,269	877,013	1,012,386
Cincinnati, New Orleans & Texas Pacific	June	337	2,263,633	483,415	2,899,444	327,923	676,924	37,210	843,656	601,615	368,383	381,228
6 mos.	337	13,508,967	3,404,173	17,913,140	1,955,544	3,977,462	249,401	4,836,573	11,583,563	4,465,469	2,289,205	2,518,243
Georgia Southern & Florida	June	397	3,026,768	1,842,566	4,869,334	72,888	74,193	3,091	1,177,747	111,993	71,731	40,997
6 mos.	397	17,711,544	1,375,230	3,418,176	427,212	463,215	16,933	1,046,668	2,062,895	732,399	413,387	334,772
New Orleans & Northeastern	June	204	772,289	184,301	1,002,363	134,873	121,245	14,547	256,208	271,375	91,475	95,889
6 mos.	204	4,904,317	1,239,693	6,144,010	805,280	747,776	85,262	1,593,497	3,480,440	1,873,080	649,953	548,406
Southern Pacific	June	8,247	31,331,371	9,714,919	44,910,455	5,610,490	7,321,208	668,213	13,463,197	10,128,116	3,761,480	3,623,126
6 mos.	8,247	176,295,818	51,194,247	227,490,065	33,658,763	45,547,650	3,987,984	77,518,286	173,560,458	47,390,124	19,004,838	19,551,738
Texas & New Orleans	June	4,327	7,686,733	2,185,842	10,500,856	1,311,844	1,321,218	155,891	6,111,043	2,698,820	1,098,495	1,259,303
6 mos.	4,329	48,349,166	12,094,661	60,443,827	8,582,009	8,354,285	932,905	17,629,564	37,770,276	15,971,627	7,138,366	8,703,112
Spokane, Portland & Seattle	June	944	2,174,195	240,521	2,565,540	684,497	206,285	15,114	1,618,725	515,728	303,655	332,172
6 mos.	944	11,838,730	1,036,866	13,614,119	3,536,768	1,279,023	87,368	3,786,114	9,084,005	1,829,497	1,707,836	1,431,251
Tennessee Central	June	286	216,164	31,842	265,859	57,772	52,594	6,201	108,264	20,485	—	76,310
6 mos.	286	1,681,726	205,405	1,995,810	387,395	360,697	40,802	714,961	1,593,644	158,104	150,445	286,763
Texas & Pacific	June	1,882	4,786,524	1,681,879	7,017,519	836,397	941,734	116,933	1,698,599	1,807,495	1,078,502	1,284,461
6 mos.	1,882	28,050,707	9,019,603	40,407,847	5,185,397	5,330,925	681,266	9,757,832	22,595,525	12,019,137	4,332,399	3,381,970
Texas Mexican	June	162	180,213	441	201,291	30,243	14,049	3,859	68,496	20,360	43,565	50,667
6 mos.	162	953,527	4,206	1,067,101	100,633	100,633	24,732	294,715	798,572	126,569	89,308	385,047
Toledo, Peoria & Western	June	239	438,947	111	444,170	43,149	32,251	23,478	1,042,245	19,725	178,368	213,114
6 mos.	239	2,524,767	62	2,547,850	251,476	163,068	147,614	574,586	1,221,873	111,190	1,063,376	1,258,276
Union Pacific System	June	9,781	35,698,116	8,473,826	47,646,463	5,562,655	7,666,223	575,205	12,051,482	14,174,512	4,407,600	2,672,390
6 mos.	9,781	188,985,786	43,786,555	232,382,339	30,907,618	46,895,618	3,355,711	69,128,439	161,518,770	65,425,901	16,984,103	16,984,103
Utah	June	111	119,610	19,625	139,235	20,236	20,236	500	36,950	16,238	15,797	6,044
6 mos.	111	665,235	665,419	1,330,654	88,438	227,717	3,189	201,490	547,509	85,062	77,538	63,726
Virginian	June	656	2,403,309	11,685	2,539,538	287,799	685,977	27,219	527,639	263,600	796,098	592,756
6 mos.	657	15,124,143	52,335	15,764,051	1,650,774	4,069,588	161,764	3,356,608	10,588,736	2,423,300	4,250,332	3,662,994
Wabash	June	2,393	6,634,412	1,030,643	8,715,519	1,187,264	1,378,263	2,978,288	5,206,237	1,741,601	3,713,080	736,717
6 mos.	2,393	41,912,314	5,148,207	49,912,201	6,098,228	6,304,606	1,084,770	13,455,598	30,434,076	12,050,970	4,955,754	4,571,404
Ann Arbor	June	294	524,295	14,063	558,418	70,743	90,713	17,144	201,197	75,818	87,590	41,777
6 mos.	294	2,969,289	56,245	3,094,924	377,295	542,200	1,251,243	1,251,243	2,344,084	348,798	385,172	327,998
Western Maryland	June	840	18,101,442	45,015	2,691,507	507,869	630,951	47,615	752,333	3,690,000	4,777,092	4,931,791
6 mos.	840	18,101,442	190,999	18,766,516	2,687,952	3,772,866	281,496	4,838,850	12,171,145	3,690,000	3,271,484	3,624,044
Western Pacific	June	1,195	4,138,728	1,012,875	5,369,736	766,319	1,519,576	97,087	1,519,576	1,358,862	628,553	720,011
6 mos.	1,195	24,734,464	3,913,533	29,571,375	5,552,032	8,184,261	8,184,261	558,230	18,060,430	7,077,899	3,554,999	3,231,915
Wheeling & Lake Erie	June	507	2,075,518	2,151,102	270,795	416,785	43,018	615,796	1,403,060	630,880	280,823	297,716
6 mos.	507	13,544,985	22	13,973,149	1,334,475	2,415,587	256,995	3,923,054	8,243,889	4,975,984	1,831,567	1,614,503
Wisconsin Central	June	1,130	1,682,480	141,179	1,972,239	287,312	148,024	44,603	665,626	317,275	432,336	215,342
6 mos.	1,130	9,122,992	476,007	10,459,902	1,293,985	1,571,974	250,380	4,156,216	7,673,328	1,145,439	1,542,862	1,804,788

Table of Freight Operating Statistics begins on next left-hand page

Railway Age—August 11, 1945

1,804,788
1,542,682
1,185,439
2,786,574
73.4
7,673,328
4,156,216
250,380
1,571,974
1,293,863

Freight Operating Statistics of Large Steam Railways—Selected

Through the Years The MILWAUKEE ROAD

HAS KEPT LOCOMOTIVES
AT TOP PERFORMANCE

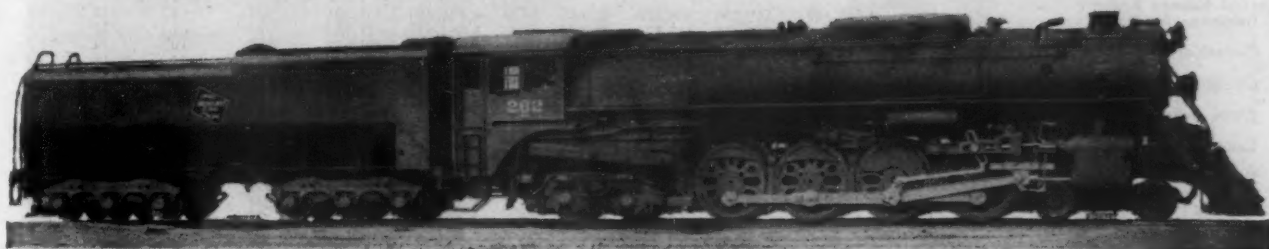
with

HSGI VITAL PARTS...

1910



1945



THESE two locomotives make one appreciate the improvement in motive power during so short a space as 35 years. Number 851 was a good engine in its day, but in neither speed, monthly mileage, nor tonnage hauled could it approach the performance of modern locomotives like the Milwaukee's Northern type No. 262.

Yet with all the vast changes in locomotive design, operation, and materials, HUNT-SPILLER GUN IRON continues to fulfill The Milwaukee's requirements as a vital material to help keep locomotives operating at top efficiency. That in itself is a high recommendation of quality. Add the 75 other roads whose use has continued for 35 years or longer and the conclusion is inescapable — HSGI is a better wear resisting material.



HUNT-SPILLER MFG. CORPORATION

N. C. RAYMOND, President

E. J. FULLER, Vice-Pres. & Gen. Mgr.

383 Dorchester Ave.

★ South Boston 27, Mass.

Canadian Representative: Joseph Robb & Co., Ltd., 5575 Cote St. Paul Rd., Montreal, P. Q.

Export Agents:

International Rwy. Supply Co., 30 Church Street, New York 7, N. Y.

Cylinder Bushings
Cylinder Packing Rings
Pistons or Piston Bull Rings
Valve Bushings
Valve Packing Rings
Valve Bull Rings

Crosshead Shoes
Hub Liners
Shoes and Wedges
Floating Rod Bushings
Light Weight Valves
Cylinder Liners and Pistons
for Diesel Service

Dunbar Sectional Type Packing
Duplex Sectional Type Packing
for Cylinders and Valves
(Duplex Springs for Above
Sectional Packing)
Cylinder Snap Rings
Valve Rings, All Shapes

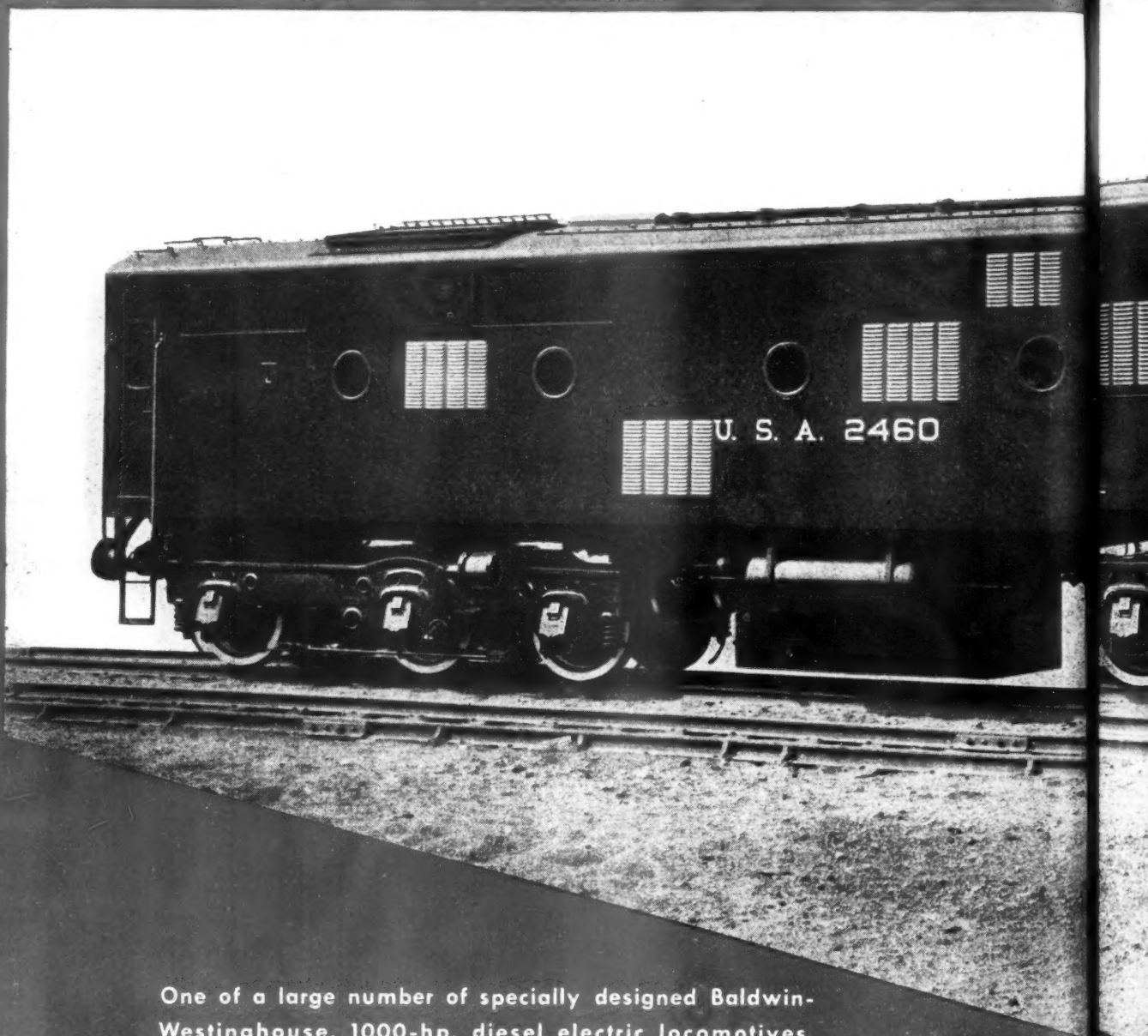
Freight Operating Statistics of Large Steam Railways—Selected

Region, road, and year		Miles of road operated	Train-miles	Locomotive-miles		Car-miles		Ton-miles (thousands)		Road locos. on line							
				Principal and helper	Light	Loaded (thousands)	Per cent loaded	Gross excl. locos. & tenders	Net rev. and non-rev.	Unstored	Stored	B. O.	Per cent B. O.				
New England Region:																	
Boston & Albany	1945	362	184,866	211,288	31,775	4,429	61.1	295,901	121,180	75		19	20.2				
	1944	362	170,921	202,493	36,159	4,208	61.3	283,561	118,098	73		21	22.3				
Boston & Maine	1945	1,777	349,467	364,752	16,240	13,597	69.1	858,516	383,387	139	10	14	8.6				
	1944	1,807	399,372	452,248	43,692	14,431	67.6	938,181	423,908	155	20	20	11.4				
N. Y., New H. & Hartf.	1945	1,815	467,524	642,581	56,250	18,588	70.9	1,097,641	482,587	224	17	37	16.6				
	1944	1,815	542,382	679,809	59,874	20,190	66.6	1,269,754	557,070	231	2	30	14.7				
Great Lakes Region:																	
Delaware & Hudson	1945	846	292,554	362,184	37,345	13,050	68.0	900,571	467,697	127	52	35	16.4				
	1944	846	339,896	412,663	40,971	14,318	67.1	1,018,047	537,822	134	41	39	18.2				
Del., Lack. & Western	1945	971	386,241	438,406	57,988	16,371	68.5	1,077,885	501,391	138	32	40	19.0				
	1944	971	391,517	468,607	75,975	17,270	69.1	1,142,368	545,321	142	29	28	14.1				
Erie	1945	2,243	930,370	991,176	84,817	44,210	63.7	2,938,507	1,252,971	298	33	55	14.2				
	1944	2,244	1,005,367	1,081,117	74,615	46,728	66.1	3,074,211	1,358,289	331	14	56	14.0				
Grand Trunk Western	1945	1,026	290,912	295,788	2,466	9,227	64.4	607,411	261,848	64	1	14	17.7				
	1944	1,026	286,661	293,282	2,475	9,240	64.0	608,992	259,205	66		12	15.4				
Lehigh Valley	1945	1,247	418,976	460,571	50,645	18,477	62.4	1,301,751	613,272	139	17	13	7.7				
	1944	1,247	655,888	727,007	109,749	27,267	59.2	2,007,807	949,846	153		14	8.4				
New York Central	1945	10,331	3,603,689	3,882,685	248,062	136,812	63.4	9,442,017	4,353,289	1,103	29	280	19.8				
	1944	10,325	3,801,612	4,100,008	258,156	143,242	61.2	10,244,153	4,724,518	1,164	9	240	17.0				
New York, Chi. & St. L.	1945	1,656	796,055	808,688	11,062	32,102	67.7	2,088,295	944,700	163	14	20	10.2				
	1944	1,657	825,341	833,777	10,308	32,770	66.0	2,166,896	975,001	168		17	9.2				
Pere Marquette	1945	1,915	491,059	512,949	13,306	17,798	65.7	1,198,815	559,818	142		24	14.5				
	1944	1,945	467,478	485,408	13,001	15,984	66.4	1,082,564	515,195	142	1	26	15.4				
Pitts. & Lake Erie	1945	229	96,544	99,223	210	4,155	65.0	349,141	204,158	30		16	34.8				
	1944	229	98,017	103,541	178	4,374	66.0	376,181	225,774	32		13	28.9				
Wabash	1945	2,381	824,009	852,751	18,419	30,023	67.9	1,984,975	900,435	177		35	16.5				
	1944	2,381	762,082	785,760	18,929	27,567	68.9	1,783,653	797,495	170	9	42	19.0				
Central Eastern Region:																	
Baltimore & Ohio	1945	6,095	2,525,547	3,119,759	308,576	89,661	64.8	6,476,250	3,254,295	922	3	258	21.8				
	1944	6,121	2,639,708	3,281,610	337,579	90,904	63.4	6,662,639	3,327,982	922	1	211	18.6				
Central of New Jersey	1945	654	221,228	254,478	53,701	8,045	62.8	575,698	281,038	117	10	24	19.9				
	1944	655	248,183	291,589	68,336	8,951	60.0	672,510	337,222	131	12	15	9.5				
Chicago & Eastern Ill.	1945	912	296,113	301,000	8,351	8,829	62.6	614,123	284,431	73	9	11.0					
	1944	912	333,132	343,887	12,075	10,303	58.7	745,514	334,603	82		5	5.7				
Elgin, Joliet & Eastern	1945	392	129,817	134,678	4,008	3,855	68.8	289,504	157,819	60		16	21.1				
	1944	392	140,457	144,410	4,056	3,834	65.5	301,900	164,778	65		11	14.5				
Long Island	1945	372	35,695	37,103	17,205	365	57.8	24,981	10,440	42		6	12.5				
	1944	372	37,543	39,154	16,041	412	56.9	30,824	13,556	45		6	11.8				
Pennsylvania System	1945	10,024	4,718,067	5,477,716	709,885	183,079	63.5	13,128,092	6,391,110	2,035		196	8.8				
	1944	9,881	4,965,220	5,789,916	761,208	192,569	62.6	14,053,904	6,883,351	1,991	1	217	9.8				
Reading	1945	1,365	529,823	593,304	68,127	18,074	64.0	1,350,626	711,225	257	28	52	15.4				
	1944	1,409	592,232	670,057	84,151	19,545	65.3	1,470,790	796,394	277	11	49	14.5				
Pocahontas Region:																	
Chesapeake & Ohio	1945	3,037	1,172,306	1,263,688	57,887	55,927	58.0	4,736,373	2,710,443	429	15	85	16.1				
	1944	3,032	1,140,308	1,224,333	60,338	54,097	58.1	4,679,364	2,701,656	408		94	18.7				
Norfolk & Western	1945	2,139	756,940	807,877	59,874	36,146	60.5	3,030,295	1,648,144	267	26	19	6.1				
	1944	2,132	803,502	856,360	60,226	37,553	59.7	3,244,601	1,775,217	295	23	20	5.9				
Southern Region:																	
Atlantic Coast Line	1945	4,926	1,080,875	1,090,510	17,410	30,458	65.4	1,980,818	883,119	394	2	25	5.9				
	1944	4,953	1,099,920	1,124,089	15,846	29,805	64.1	1,997,663	894,498	364	7	29	7.3				
Central of Georgia	1945	1,783	326,453	333,060	5,489	8,169	73.6	519,193	248,098	96		8	7.7				
	1944	1,783	368,341	378,875	6,148	8,666	68.3	574,984	266,121	96		8	7.7				
Gulf, Mobile & Ohio	1945	1,932	324,468	417,485	3,090	12,429	76.3	762,942	358,854	104	4	8	6.9				
	1944	1,962	324,881	412,969	2,830	11,595	72.0	763,918	372,712	113		8	6.6				
Illinois Central (incl. Yazoo & Miss. Vv.)	1945	6,346	1,831,449	1,853,838	33,770	71,335	62.8	4,947,410	2,279,274	623	3	64	9.3				
	1944	6,347	1,880,168	1,899,117	34,855	70,948	60.7	5,037,528	2,290,020	661		38	5.4				
Louisville & Nashville	1945	4,746	1,755,231	1,897,675	50,340	46,958	64.6	3,337,735	1,656,366	419	5	57	11.9				
	1944	4,736	1,693,512	1,832,739	45,478	43,889	64.0	3,180,311	1,592,866	426	7	60	12.2				
Seaboard Air Line	1945	4,157	994,767	1,057,622	15,369	28,124	68.1	1,830,003	809,782	266		66	19.9				
	1944	4,161	1,003,312	1,060,791	15,369	27,897	66.2	1,862,382	814,462	307		43	12.3				
Southern	1945	6,471	2,120,427	2,155,411	37,988	50,313	71.6	3,112,156	1,441,442	603		106	15.0				
	1944	6,479	2,295,571	2,344,347	35,904	51,234	68.6	3,336,060	1,557,440	610		80	11.6				
Northwestern Region:																	
Chi. & North Western	1945	8,062	1,118,993	1,168,767	25,756	36,050	68.8	2,441,442	1,135,575	357	8	107	22.7				
	1944	8,074	1,051,471	1,095,123	18,476	34,330	67.6	2,320,416	1,064,230	378	15	98	20.0				
Chicago Great Western	1945	1,445	282,733	290,246	9,132	9,282	74.7	592,677	275,921	69		10	12.7				
	1944	1,445	290,553	298,009	10,811	9,500	73.2	609,401	282,085	73		9	11.0				
Chi., Milw., St. P. & Pac.	1945	10,714	1,574,904	1,682,487	78,670	55,742	66.5	3,820,116	1,814,734	503	42	63	10.4				
	1944	10,715	1,561,537	1,665,157	71,903	53,526	70.5	3,565,005	1,746,039	502	44	65	10.6				
Chi., St. P., Minneap. & Om.	1945	1,606	204,060	220,666	13,544	5,545	69.3	377,558	175,767	89	18	22	17.1				
	1944	1,606	208,451	221,767	11,709	5,448	68.7	371,756	176,123	101	23	10	7.5				
Duluth, Missabe & I. R.	1945	546	170,164	171,026	1,672	9,305	51.0	861,634	325,605	51		3	5.6				
	1944	545	175,942	176,635	1,203	9,524	50.7	884,536	325,605	55		1	1.8				
Great Northern	1945	8,276	1,288,238	1,288,539	69,893	54,274	66.8	3,933,926	1,994,438	397	15	63	13.3				
	1944	8,276	1,221,459	1,215,635	51,468	48,753	70.6	3,459,520	1,814,263	396	15	51	11.0				
Min., St. P. & S. St. M.	1945	4,259	469,164	483,582	7,677	12,663	63.5	898,057	432,433	127	3	13	9.1				
	1944	4,259	504,368	515,882	7,591	14,070	67.5	984,945	493,161	134	1	5	3.6				
Northern Pacific	1945	6,577	984,901	1,049,782	74,598	43,139	72.7	2,877,248	1,452,896	372	15	62	13.8				
	1944	6,571	940,209	1,008,301	75,611	40,061	76.9	2,640,751	1,399,177	364	19	55	12.6				
Central Western Region:																	
Alton	1945	915	290,230	310,131	1,041	8,222	70.3	541,756	232,206	72		8	10.0				
	1944	915	219,587	228,407	89	6,221	70.8</										

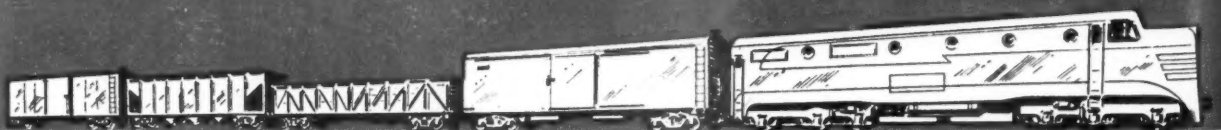
Items for the Month of May 1945 Compared with May 1944

				Freight cars on line			G.t.m. per train-hr. and tenders		G.t.m. per train-mi. excl. locos. and tenders		Net ton-mi. per train-mile		Net ton-mi. per car-mile		Net ton-mi. per car-day		Car miles per car-day		Net daily ton-mi. per road-mi.		Coal lb. per 1000 g.t.m. inc. loco.		Mi. per loco. per day	
Region, road, and year				Home	Foreign	Total	Per Cent B. O.																	
New England Region:																								
Boston & Albany				1945	197	5,665	5,862	0.6	24,630	1,607	658	27.4	638	38.2	10,798	182	93.6							
				1944	372	6,168	6,540	0.4	26,415	1,664	693	28.1	630	36.6	10,524	180	90.3							
Boston & Maine				1945	1,878	11,086	12,964	2.3	39,336	2,463	1,100	28.2	969	49.7	6,960	105	79.8							
				1944	2,427	12,373	14,800	1.9	37,704	2,356	1,064	29.4	989	49.8	7,567	96	95.7							
N. Y., New H. & Hartf.†				1945	1,999	19,515	21,514	4.2	33,526	2,362	1,038	26.0	700	38.0	8,577	92	88.1							
				1944	3,201	20,374	23,575	2.5	35,702	2,378	1,043	27.6	746	40.6	9,901	95	95.3							
Great Lakes Region:																								
Delaware & Hudson				1945	3,846	6,034	9,880	3.7	52,702	3,099	1,609	35.8	1,480	60.7	17,833	105	63.1							
				1944	3,826	5,340	9,166	2.7	50,743	3,010	1,590	37.6	1,700	70.2	20,507	103	71.3							
Del., Lack. & Western				1945	5,912	11,987	17,899	2.6	44,158	2,818	1,311	30.6	874	40.7	16,657	117	84.0							
				1944	5,838	12,665	18,503	2.7	43,905	2,944	1,406	31.6	935	42.9	18,116	111	95.1							
Erie				1945	10,033	28,242	38,275	3.4	52,934	3,176	1,354	28.3	1,075	59.6	18,020	95	96.3							
				1944	10,766	26,024	36,790	3.1	51,146	3,072	1,357	29.1	1,151	59.9	19,526	89	100.7							
Grand Trunk Western				1945	2,363	8,594	10,957	4.3	42,322	2,104	907	28.4	764	41.8	8,233	82	130.3							
				1944	3,718	6,579	10,297	4.8	43,237	2,145	913	28.1	893	49.8	8,150	83	128.9							
Lehigh Valley				1945	7,345	17,635	24,980	2.5	53,916	3,190	1,503	33.2	738	35.6	15,864	102	102.7							
				1944	6,864	23,968	30,832	2.4	50,703	3,191	1,509	34.8	1,002	48.6	24,571	101	168.1							
New York Central				1945	43,665	96,598	140,263	4.1	41,998	2,652	1,223	31.8	973	48.3	13,593	103	104.7							
				1944	46,728	97,031	143,759	3.6	44,541	2,726	1,257	33.0	1,042	51.7	14,761	97	110.0							
New York, Chi. & St. L.				1945	1,824	14,401	16,225	2.4	49,273	2,632	1,191	29.4	1,802	90.4	18,402	87	141.4							
				1944	2,959	13,458	16,417	2.7	50,988	2,641	1,188	29.8	1,865	95.0	18,981	81	154.7							
Pere Marquette				1945	3,051	11,003	14,054	2.4	42,596	2,467	1,152	31.5	1,331	64.4	9,430	89	108.7							
				1944	2,915	8,798	11,713	2.6	40,873	2,369	1,127	32.2	1,419	66.3	8,545	84	101.7							
Pitts. & Lake Erie				1945	3,844	10,434	14,278	5.6	50,309	3,619	2,116	49.1	460	14.4	28,759	96	74.7							
				1944	3,595	8,677	12,272	3.8	54,354	3,842	2,306	51.6	579	17.0	31,804	85	84.6							
Wabash				1945	5,070	14,257	19,327	3.5	43,421	2,433	1,104	30.0	1,497	73.5	12,199	108	137.8							
				1944	7,219	13,635	20,854	2.3	45,259	2,365	1,058	28.9	1,228	61.6	10,805	101	121.8							
Central Eastern Region:																								
Baltimore & Ohio				1945	37,918	48,906	86,824	4.9	32,359	2,628	1,320	36.3	1,163	49.4	17,224	143	96.7							
				1944	41,529	61,412	102,941	2.8	32,033	2,591	1,294	36.6	1,075	46.3	17,539	136	106.3							
Central of New Jersey†				1945	4,312	14,479	18,791	5.3	32,035	2,727	1,331	34.9	441	20.1	13,862	125	83.1							
				1944	5,346	16,333	21,679	2.3	33,427	2,724	1,366	37.7	506	22.4	16,608	125	99.7							
Chicago & Eastern Ill.				1945	2,453	4,846	7,299	6.0	38,005	2,142	992	32.2	1,326	65.8	10,061	113	129.7							
				1944	2,296	4,951	7,247	3.7	37,982	2,284	1,025	32.5	1,376	72.2	11,835	113	135.6							
Elgin, Joliet & Eastern				1945	8,265	6,604	14,869	2.9	18,806	2,362	1,288	40.9	353	12.5	12,987	139	84.0							
				1944	8,565	6,452	15,017	2.8	18,025	2,292	1,251	43.0	358	12.5	13,560	130	90.5							
Long Island				1945	36	5,065	5,101	4	5,896	715	299	28.6	56	3.4	905	340	49.9							
				1944	36	5,011	5,047	4	6,239	837	368	32.9	89	4.8	1,176	296	48.7							
Pennsylvania System				1945	112,450	122,181	234,631	4.9	39,228	2,876	1,400	34.9	852	38.5	20,567	116	96.5							
				1944	121,033	130,487	251,520	3.5	39,866	2,920	1,430	35.7	882	39.4	22,472	123	103.6							
Reading				1945	11,362	23,911	35,273	2.8	34,559	2,553	1,344	39.4	624	24.8	16,808	105	71.1							
				1944	13,028	20,918	33,946	1.9	31,348	2,488	1,347	40.7	744	28.0	18,233	117	83.3							
Pocahontas Region:																								
Chesapeake & Ohio				1945	37,388	19,427	56,815	1.8	58,941	4,092	2,341	48.5	1,558	55.4	28,789	74	86.4							
				1944	39,714	18,146	57,860	1.1	59,203	4,156	2,399	49.9	1,510	52.1	28,743	71	89.8							
Norfolk & Western				1945	30,142	7,531	37,673	2.3	63,703	4,039	2,197	45.6	1,425	51.6	24,855	86	95.4							
				1944	28,577	7,723	36,300	3.0	64,628	4,107	2,247	47.3	1,482	52.5	26,860	83	94.8							
Southern Region:																								
Atlantic Coast Line				1945	7,295	17,373	24,668	1.6	30,908	1,844	822	29.0	1,075	56.7	5,783	113	89.7							
				1944	8,056	19,898	27,954	2.7	30,938	1,825	817	30.0	996	51.8	5,826	106	95.8							
Central of Georgia†				1945	1,974	7,591	9,565	1.3	29,575	1,596	763	30.4	841	37.6	4,489	134	110.9							
				1944	2,163	7,008	9,171	1.4	30,165	1,577	730	30.7	964	46.0	4,815	123	125.9							
Gulf, Mobile & Ohio				1945	1,483	7,817	9,300	8	41,595	2,359	1,110	28.9	1,341	60.8	5,992	109	123.5							
				1944	2,071	7,794	9,865	9	39,438	2,357	1,150	32.1	1,223	52.9	6,128	109	115.6							
Illinois Central (incl. Yazoo & Miss. Vv.)				1945	17,383	39,346	56,729	1.2	44,879	2,766	1,275	32.0	1,271	63.4	11,586	112	90.3							
				1944	18,479	34,633	53,112	1.0	44,623	2,745	1,248	32.3	1,365	69.7	11,639	112	92.6							
Louisville & Nashville				1945	28,264	18,247	46,511	5.5	29,870	1,902	944	35.3	1,151	50.5	11,258	126	136.5							
				1944	31,013	15,658	46,671	3.4	29,683	1,878	941	36.3	1,074	46.3	10,849	124	129.7							
Seaboard Air Line*				1945	5,520	17,312	22,832	1.8	33,125	1,890	836	28.8	1,105	56.3	6,284	121	113.6							
				1944	6,729	17,777	24,506	1.8	32,300	1,893	828	29.2	1,061	54.9	6,314	127	108.4							
Southern				1945	13,689	31,082	44,771	3.2	25,268	1,483	687	28.6	1,012	49.3	7,185	144	105.0							
				1944	16,888	33,075	49,963	1.9	25,255	1,471	687	30.4	1,000	48.0	7,754	142	117.5							
Northwestern Region:																								
Chi. & North Western				1945	19,134	30,136	49,270	3.8	35,598	2,277	1,059	31.5	749	34.6	4,544	124	88.0							
				1944	22,602	29,779	52,381	3.5	35,115	2,271	1,042	31.0												

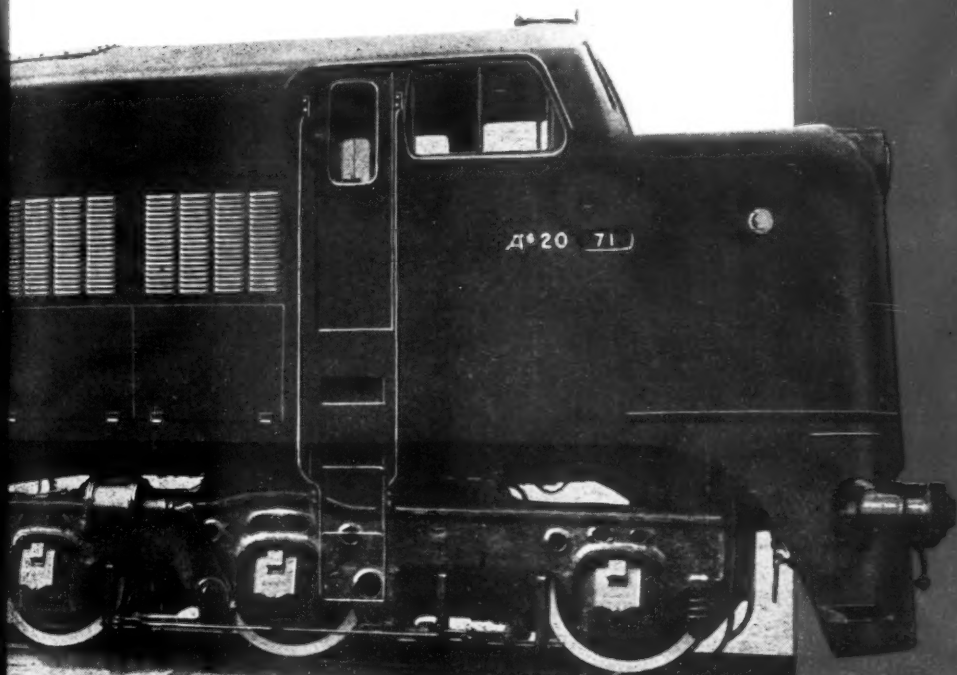
1000-hp. ROAD



One of a large number of specially designed Baldwin-Westinghouse, 1000-hp. diesel electric locomotives, to be used in general road service by the U. S. S. R. The locomotives are mounted on two 6-wheeled trucks. A motor mounted on each of the six axles gives unusually high continuous rating—49,300 lb. at 5.6 m.p.h.



DIESEL FOR RUSSIA



THE

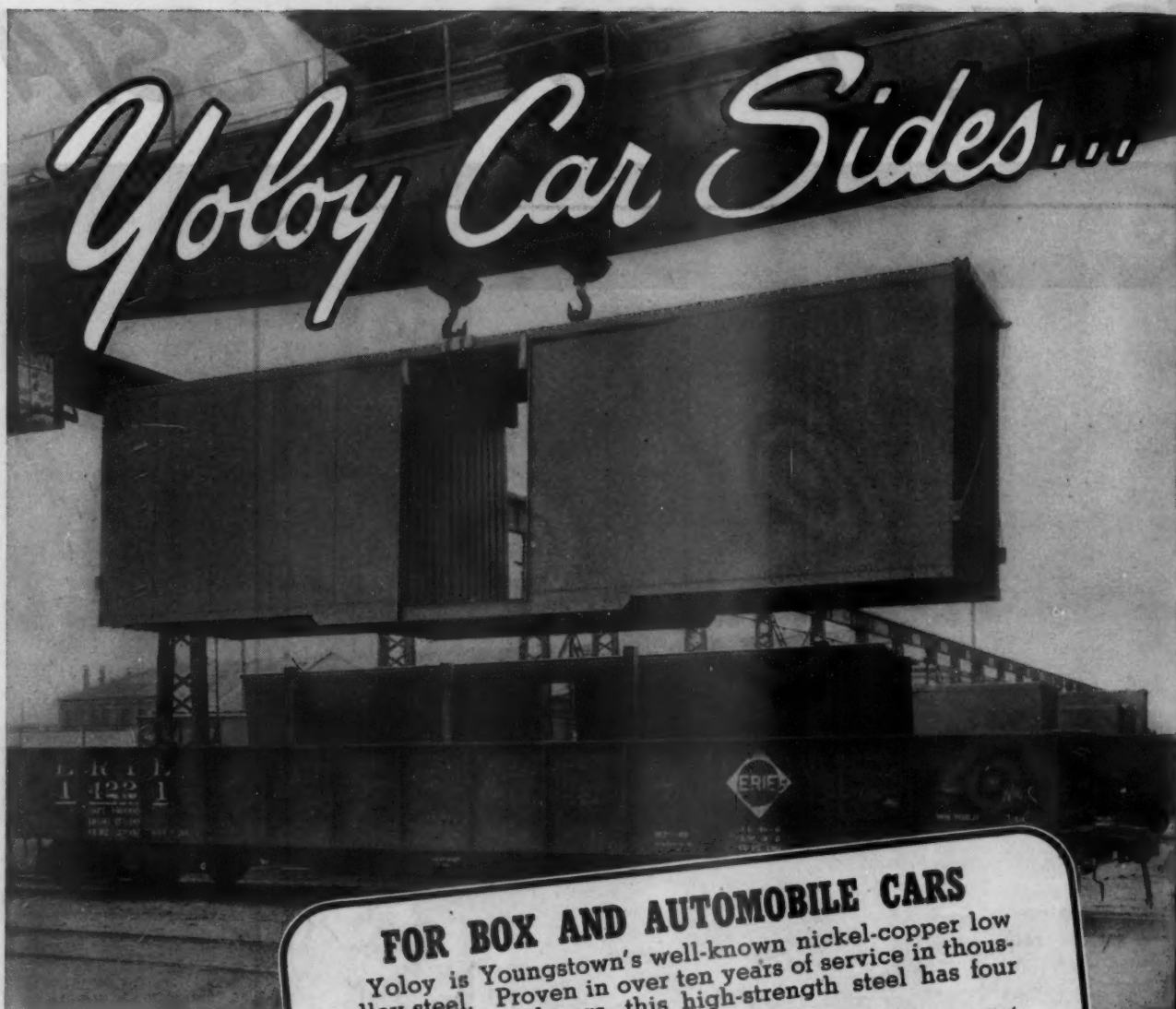
BALDWIN-

LOCOMOTIVE WORKS, PHILADELPHIA

Westinghouse

ELECTRIC CORPORATION, EAST PITTSBURGH, PA.





One Class I railroad which recently took delivery of a large order of Yoloy car sides and doors reports a dead weight saving of 23% on automobile cars and 22% on box cars.

FOR BOX AND AUTOMOBILE CARS

Yoloy is Youngstown's well-known nickel-copper low alloy steel. Proven in over ten years of service in thousands of railroad cars, this high-strength steel has four outstanding advantages:

1. *Weight Saving* - Its use as car sides saves 20% to 25% of dead weight.
2. *Corrosion Resistance* - Two to four times that of regular steel.
3. *Resistance to Shock and Abrasion* - Excellent. Enables cars to withstand abuse, particularly at low temperatures, and greatly prolongs their useful life.
4. *Forming and Welding* qualities are good. Permit the many improvements and refinements desired in modern car construction.

We are ready to talk to you NOW about your requirements, both immediate and future. Yoloy car sides and Yoloy doors can be secured from The Youngstown Steel Door Company, Youngstown, Ohio. Yoloy is also available for other construction needs.

YOUNGSTOWN

THE YOUNGSTOWN SHEET AND TUBE COMPANY

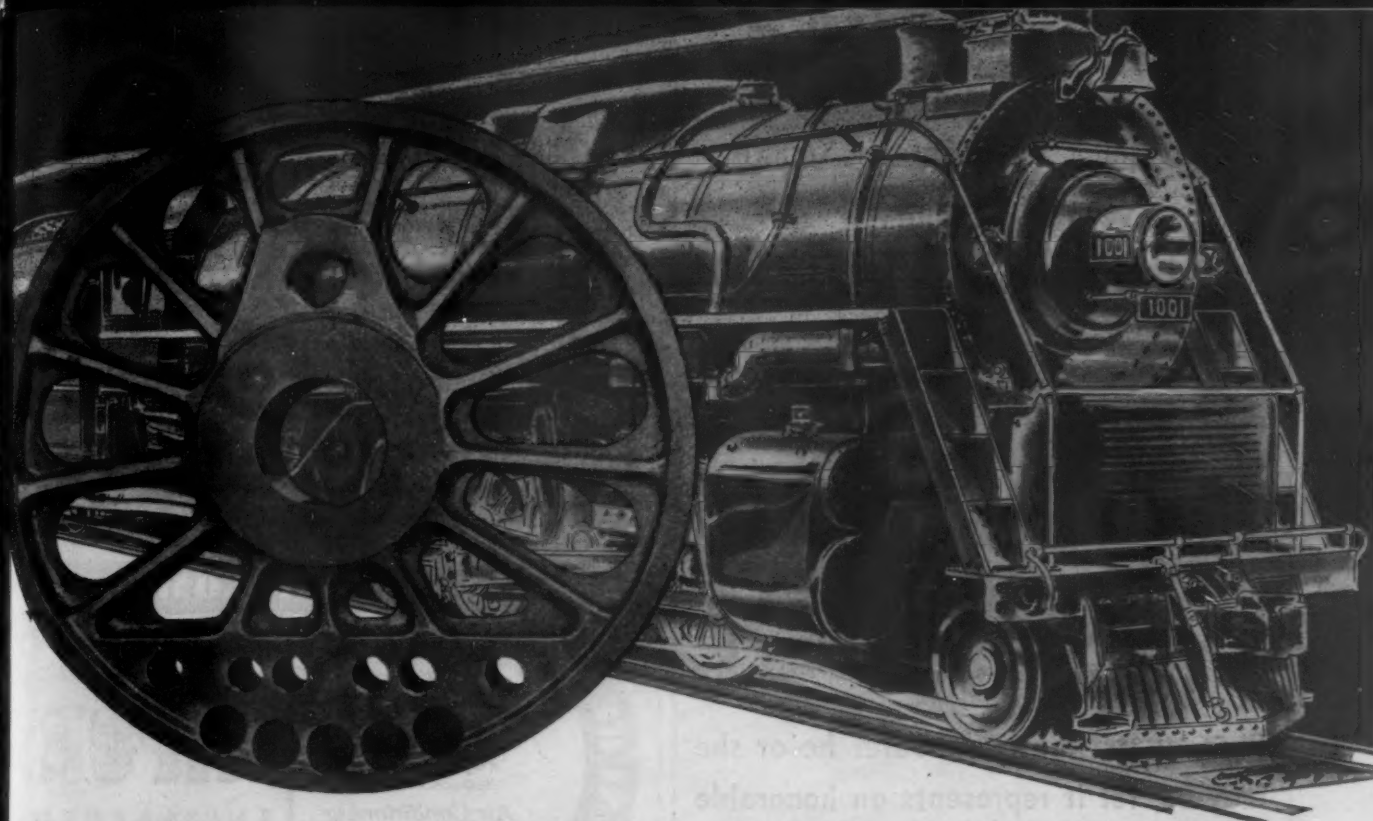
YOUNGSTOWN 1, OHIO

Manufacturers of

CARBON - ALLOY AND YOLOY STEELS



Pipe and Tubular Products -
Sheets - Plates - Conduit - Bars -
Coke Tin Plate - Electrolytic
Tin Plate - Rods - Wire - Nails -
Tie Plates and Spikes.



For Greater Loads..Heavier Thrusts..Higher Speeds

During the past ten years American locomotives have undergone an evolution resulting in improvements of design and performance which eclipse any other decade in the history of rail transportation. More critical requirements imposed upon the "running gear" of modern, high-speed locomotives have prompted many builders and roads to specify the

UNION WEB SPOKE DRIVING WHEEL CENTER

- ★ Cruciform section spokes for great additional strength.
- ★ Reinforced rim support to eliminate flat spots, out of roundness, etc.
- ★ Correct distribution of metal for better balancing of small diameter wheels.
- ★ Wheels easily inspected before and after installation.
- ★ Troubles due to shrinkage eliminated by simplicity of design.
- ★ Can be made to any material specification.



FIRST OF THE "PACIFICS"...1893

Contrary to general belief, the 4-6-2 or Pacific type made its appearance before the 20th century. No. 830 is one of three compound engines built in 1893 by the Rhode Island Locomotive Works (ALCO) for the Chicago, Milwaukee & St. Paul Railroad. They were designed for fast passenger service and proved eminently successful... Cylinders 21 and 31-inch bore by 20-inch stroke (compound)... Drivers 78 inches in diameter... Total weight 143,000 pounds... Weight on drivers 88,500 pounds.

UNION STEEL CASTINGS

DIVISION OF
BLAW-KNOX CO.
PITTSBURGH, PA.

This Stands for Honorable Service
to Our Country



Respect its wearer, whoever he or she
may be, for it represents an honorable
discharge from the armed forces of the
United States . . . for a job well done.

NEW FIFTH EDITION LAYING OUT FOR BOILER MAKERS AND PLATE FABRICATORS

Revised by

GEORGE M. DAVIES

Boiler Designer, New York Central

THIS well-known book, first published in 1907, which has been out of print several years, has been thoroughly revised and brought up to date. The locomotive boiler chapters have been greatly expanded. Important new chapters include one on Laying Out and Computing Boiler Patches, and one on Laying Out for Welded Construction. Much additional material has been added on plate fabrication but important chapters on sheet metal layout have been left in. The book has been entirely reset in easier reading type and all the new layout drawings are sharp and clear. Written in shop language and without resort to higher mathematics. Send for descriptive circular, or for a copy of the book as soon as ready on 'Ten Days' approval.

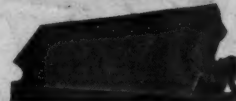
530 pages, 700 illus., 9 x 12, cloth \$8.00

BOOK DEPARTMENT

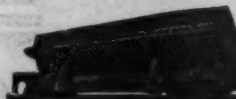
**SIMMONS-BOARDMAN
PUBLISHING CORP.**
30 CHURCH STREET, NEW YORK 7, N. Y.



**AIR DUMP
CARS**



**RAIL CARS
MINE CARS
AND
LOCOMOTIVES**



**AXLESS TRAINS
COMPLETE
HAULAGE SYSTEM**

DIFFERENTIAL STEEL CAR CO.
FINDLAY, OHIO

INCREASED PASSENGER COMFORT

Steam Couplers
A. R. A. STANDARD

Flexible Conduits
REPLACES RUBBER HOSE

Vapor Systems
THERMOSTATIC CONTROL

Air Conditioning
Controls

**WITH
VAPOR
ENGINEERED
PRODUCTS**

**VAPOR CAR
HEATING CO., INC.**
RAILWAY EXCHANGE, CHICAGO, ILL.

HYMAN-MICHAELS COMPANY

Relaying Rails ★ ★ ★ Dismantling

Used railroad equipment—cars—locomotives
Freight Car Replacement Parts

Complete stocks of guaranteed used freight car parts carried on hand by us at all times. Located conveniently for shipment to any part of country. Write — Phone — Wire — when interested in used Rails, Equipment, Cars, Car or Track Dismantling, or Car Parts.

Main Office

122 SOUTH MICHIGAN AVENUE
CHICAGO, ILLINOIS

Branches

New York
St. Louis
SERVICE

San Francisco
Los Angeles
QUALITY

Houston
Havana, Cuba
RELIABILITY

OHIO LOCOMOTIVE CRANES

GASOLINE - DIESEL
STEAM - ELECTRIC

The OHIO LOCOMOTIVE CRANE Co. BOSTON

Buy
War Bonds

The War is Over — the British Isles Still Stand

EUROPE IS AT PEACE. Her roads are open and beckoning. So lately the fortress of Europe, the British Isles now stand ready to welcome to their shores their neighbors and friends from across the Atlantic. Battle-scarred are these ancient lands. But they retain, as always, the centuries-old grandeur, charm and romance that typify them.

Whether you plan to travel now, or later, consult your local travel agent.

In the workshops of war we have witnessed the spectacular achievements of speed, efficiency, and safety in transport.

Faster trains, vastly expanded air services, modernized cross-channel ships, improved standards of comfort generally should, therefore, in the fullness of time be at your disposal. We shall welcome you.

Associated British and Irish Railways Inc.
9 ROCKEFELLER PLAZA, NEW YORK 20, N. Y.



Prepared especially for this campaign by The Caples Company, New York (Agency for Associated British & Irish Railways, Inc.)

What about YOUR Post-War TRAVEL ADS?



When the airways, seaways and railways can carry vacation travelers once more, when Tokyo is as flat as Berlin, ads like this will begin appearing in TIME again.

For travel advertisers know well that TIME is the best way to reach more than a million of America's most traveled families.

TIME has been the leader in Travel, Resort and Hotel advertising for nine of the last eleven years. And TIME will

be tops tomorrow. For a recent survey shows that even now hundreds of thousands of TIME families are mentally on the move, planning postwar vacations. In fact, they are planning to do twice as much traveling as ever before.

Take the British Isles, for example: 70,000 TIME families are planning to see that "tight little isle" within the next five years, 310,000 to go there some day.

The Way to Reach America's Most Traveled Million

TIME ADVERTISING OFFICES: NEW YORK • CHICAGO • BOSTON • PHILADELPHIA • CLEVELAND • DETROIT • SAN FRANCISCO

This Stands for Honorable Service
to Our Country



Respect its wearer, whoever he or she may be, for it represents an honorable discharge from the armed forces of the United States . . . for a job well done.

NEW FIFTH EDITION LAYING OUT FOR BOILER MAKERS AND PLATE FABRICATORS

Revised by

GEORGE M. DAVIES

Boiler Designer, New York Central

THIS well-known book, first published in 1907, which has been out of print several years, has been thoroughly revised and brought up to date. The locomotive boiler chapters have been greatly expanded. Important new chapters include one on Laying Out and Computing Boiler Patches, and one on Laying Out for Welded Construction. Much additional material has been added on plate fabrication but important chapters on sheet metal layout have been left in. The book has been entirely reset in easier reading type and all the new layout drawings are sharp and clear. Written in shop language and without resort to higher mathematics. Send for descriptive circular, or for a copy of the book as soon as ready on Ten Days' approval.

530 pages, 700 illus., 9 x 12, cloth \$8.00

BOOK DEPARTMENT

**SIMMONS-BOARDMAN
PUBLISHING CORP.**
30 CHURCH STREET, NEW YORK 7, N. Y.



DIFFERENTIAL STEEL CAR CO.
FINDLAY, OHIO

INCREASED PASSENGER COMFORT

Steam Couplers
A. R. A. STANDARD

Flexible Conduits
REPLACES RUBBER HOSE

Vapor Systems
THERMOSTATIC CONTROL

Air Conditioning
Controls

WITH VAPOR ENGINEERED PRODUCTS

VAPOR CAR HEATING CO., INC.
RAILWAY EXCHANGE, CHICAGO, ILL.

YAPOR SYSTEM
GUARANTEED EFFICIENCY

HYMAN-MICHAELS COMPANY

Relaying Rails ★ ★ ★ Dismantling

Used railroad equipment—cars—locomotives

Freight Car Replacement Parts

Complete stocks of guaranteed used freight car parts carried on hand by us at all times. Located conveniently for shipment to any part of country. Write — Phone — Wire — when interested in used Rails, Equipment, Cars, Car or Track Dismantling, or Car Parts.

Main Office

122 SOUTH MICHIGAN AVENUE
CHICAGO, ILLINOIS

Branches

New York
St. Louis
SERVICE

San Francisco
Los Angeles
QUALITY

Houston
Havana, Cuba
RELIABILITY



The OHIO LOCOMOTIVE CRANE Co. "STEAM"

Buy
War Bonds

The War is Over — the British Isles Still Stand

EUROPE IS AT PEACE. Her roads are open and beckoning. Solately the fortress of Europe, the British Isles now stand ready to welcome to their shores their neighbors and friends from across the Atlantic. Battle-scarred are these ancient islands. But they retain, as always, the centuries-old grandeur, charm and romance that typify them.

Whether you plan to travel now, or later, consult your local travel agent.

In the workshops of war we have witnessed the spectacular achievements of speed, efficiency, and safety in transport.

Faster trains, vastly expanded air services, modernized cross-channel ships, improved standards of comfort generally should, therefore, in the fullness of time be at your disposal. We shall welcome you.

Associated British and Irish Railways Inc.
9 ROCKEFELLER PLAZA, NEW YORK 20, N. Y.



Prepared especially for this campaign by The Caples Company, New York. (Agency for Associated British and Irish Railways, Inc.)

What about YOUR Post-War TRAVEL ADS?

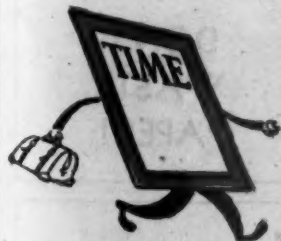
When the airways, seaways and railways can carry vacation travelers once more, when Tokyo is as flat as Berlin, ads like this will begin appearing in *TIME* again.

For travel advertisers know well that *TIME* is the best way to reach more than a million of America's most traveled families.

TIME has been the leader in Travel, Resort and Hotel advertising for nine of the last eleven years. And *TIME* will

be tops tomorrow. For a recent survey shows that even now hundreds of thousands of *TIME* families are mentally on the move, planning postwar vacations. In fact, they are planning to do twice as much traveling as ever before.

Take the British Isles, for example: 70,000 *TIME* families are planning to see that "tight little isle" within the next five years, 310,000 to go there some day.



The Way to Reach America's Most Traveled Million

TIME ADVERTISING OFFICES: NEW YORK • CHICAGO • BOSTON • PHILADELPHIA • CLEVELAND • DETROIT • SAN FRANCISCO

GET TOGETHER DEPARTMENT

Educational Services for RAILROAD MEN

Our New Service
on
Diesel Locomotive
Operation
is highly recommended
for
Engineers and Firemen

*The Railway
Educational Bureau*
Omaha 2, Nebraska

GET OUR PRICES FIRST RAILWAY EQUIPMENT and ACCESSORIES

We can furnish rails, spikes,
bolts, angle bars, cranes and
other railway material. Machines,
motors, pumps, etc.
Write, wire or phone inquiries

**Sonken - Galamba
Corp.**
Kansas City 18, Kans.

RELAYING RAILS

12th—exceptionally good quality
— RAILROAD TIE PLATES
for all size rails. All in good
condition. For complete details,
contact
SONKEN-GALAMBA CORP.
Kansas City 18, Kans.

REPRESENTATION

Manufacturer's representa-
tives with established contacts;
railroad purchasing and mainte-
nance departments; Chicago and
New York districts open for at-
tractive proposition, adding ac-
cepted quality line, write Railroad
Division, Consolidated Labora-
tories, 1470 South Vandeventer
Avenue, St. Louis 10, Missouri.

Wanted WORKS MANAGER or GENERAL SUPERINTENDENT

For Freight car manufacturing
plant located in Southern Illi-
nois. Excellent opportunity for
experienced man. Write, giving
complete details, to Box 753,
RAILWAY AGE, 30 Church
St., New York 7, N. Y.

RAILROAD EQUIPMENT

78 ton Baldwin Type 0-6-0 Switcher — Side Tank
80 ton Baldwin Type 0-6-0 Switcher — Separate Tender
110 ton American Type 0-8-0 Switchers — Separate Tenders
181 ton American Type 2-8-2 Mikados with Boosters

All of the above Locomotives in excellent condition.

Model 250 Brill Gas Electric all steel combination passenger, baggage
and mail car new in 1928. Now being completely rebuilt.

Full detailed particulars with quotation on any of the above items
will be gladly furnished.

THOMAS F. CAREY CO., Inc.
120 LIBERTY STREET
New York 6, New York

50 TON ALL STEEL BOX CARS

25—50 ton all steel box cars. New 1929. U section cast steel
side frames. Duryea cushioned underframes. Fully lined. Inside
length 40' 6". Capacity 3548 cu. ft. Excellent condition.

THOMAS F. CAREY CO., INC.
120 Liberty Street
New York 6, N. Y.
Telephone Barclay 7-1770

Freight Car Prices REDUCED!

Now Only Half of Recent Peak Prices—
As Low As \$500

- 7, Hopper, Twin, 50-Ton
- 80, Hopper, Side Discharge, 50-Ton
- 10, Refrigerator, 40-Ft., 40-Ton
- 10, Box, 40-Ft., 40-Ton
- 7, Box, Automobile, Steel, 50-Ft., 50-Ton
- 6, Dump, Magor, 30-Yd., 50-Ton; Lift Door
- 2, Dump, Clark, Automatic, 30-Yd., 50-Ton; Drop Door
- 4, Dump, K & J Automatic, Lift Door; 37-Yd., 50-Ton
- 20, Dump, Koppel, Automatic, 20-Yd., 40-Ton; Lift Doors
- 10, Dump, K & J Automatic Lift Door; 20-Yd., 50-Ton
- 2, Dump, K & J, Lift Door, 37-Yd., 50-Ton
- 2, Tank, 8000-Gallon, 40-Ton Trucks
- 5, Tank, 10,000-Gallon, 50-Ton Trucks

All cars are priced to sell!

IRON & STEEL PRODUCTS, INC.
40 years' experience

13486 S. Brainard Ave. Chicago 33, Illinois
"ANYTHING containing IRON or STEEL"

POSITION WANTED

Group of the best experienced
track men with camp equipment
looking for steady job. Will go
anywhere. Address Box 754,
RAILWAY AGE, 30 Church
Street, New York 7, N. Y.

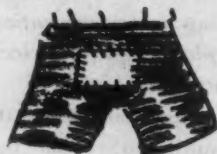
**DON'T
WASTE
PAPER!**

**BUY
WAR BONDS**

Use it up... Wear it out



Make it do... Or do without



KEEP PRICES DOWN

No light for 2,000,000,000 years

William Beebe descended 3,028 feet in the famous Bathysphere to jet-black depths of the ocean to view the deep-sea marine life, where no light had previously penetrated for two billion years. With lives depending on correct judgment in the selection of equipment, OKONITE cables were chosen for communications and illumination. This was just another proof that OKONITE cables are *dependable* under the most severe conditions. The Okonite Company, Passaic, N. J.

3703

OKONITE
INSULATED WIRES AND CABLES

VIKING... HAS THE "KNOW HOW" TO BUILD GOOD ROTARY PUMPS

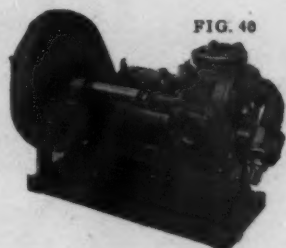


FIG. 40

200-300-450-750 and 1050 GPM capacities — other motor drive units available down to 1/2 GPM

The secret of most good rotary pumping jobs is knowing what type, size and style of pump should be used to do a certain specific job... then to be able to furnish a pump that is built to do the job specified.

The answer is Viking's wealth of experience in every field which calls for rotary pumps. More Vikings have been installed than any other rotary pump... giving this company "know how" leadership in the industry.

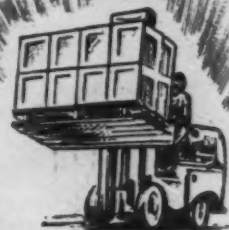
The line of Viking Rotary Pumps far exceeds any other. It is the most complete line in the world. Write today for Bulletin Series 2500, which illustrates Viking Pumps widely used in the fueling of diesel driven trains.



VIKING Pump COMPANY
CEDAR FALLS, IOWA

24 PAGES, pictorially presented, showing CLARK Fork Trucks and pallet methods in 32 different types of materials handling operations.

Contains illustrations and specifications of different pallet designs. Yours for the asking — mail the coupon NOW!



CLARK TRUCKTRACTOR DIVISION

1031 James Street, Battle Creek, Michigan.

I would like a copy of your book "CLARK BOOK ON PALLET"

Name

Company

Address

City Zone State

Index to Advertisers

August 11, 1945

A	
Air Reduction Sales Company	21
American Air Filter Company, Inc.	10
American Arch Company, Inc.	39
American Car and Foundry Company	4, 5
American Locomotive Company	7, 40a, 40b
American Steel Foundries	55
Armco Railroad Sales Co., Inc.	14

B	
Baldwin Locomotive Works, The	42, 43
Bendix Aviation Corporation, Radio Division	23
Bethlehem Steel Company	6

C	
Carey Co., Inc., Thomas F.	48
Caterpillar Tractor Co.	15
Clark Tractor Division of Clark Equipment Company	49
Classified Advertisements	48
Consolidated Laboratories, Railroad Division	48

D	
Differential Steel Car Company	46

E	
Edison Storage Battery Division of Thomas A. Edison, Inc.	22
Electric Storage Battery Company, The	20
Electro-Motive Division, General Motors Corporation	41a, 41b

F	
Fairbanks, Morse & Co.	11
Franklin Railway Supply Company, Inc.	38

G	
General Electric Company	7
Get Together Department	48
Gould Storage Battery Corporation	18
Gustin-Bacon Mfg. Company	12

H	
Harbison-Walker Refractories Co.	39
Hunt-Spiller Mfg. Corporation	41c
Hyman-Michaels Company	46

I	
Iron and Steel Products, Inc.	48

K	
Kerite Insulated Wire & Cable Company, Inc., The	26
Koppers Company, Inc.	13

L	
Lima Locomotive Works, Incorporated	37

M	
Miner, Inc., W. H.	3
Missouri-Kansas-Texas Railroad Company	19

N	
National Malleable and Steel Castings Co.	28

O	
Ohio Locomotive Crane Co., The	46
Okonite Company, The	49

P	
Pettibone Mulliken Corporation	31
Pittsburgh Steel Foundry Corporation	25

R	
Railway Educational Bureau, The	48
Republic Steel Corporation	24
Reynolds Metals Company, Railway Supply Division	16, 17

S	
Schaefer Equipment Company	29
Shell Oil Company	27
Simmons-Boardman Publishing Corp.	46
Sonken-Galamba Corp.	48
Standard Railway Equipment Mfg. Company	36
Superheater Company, The	40

T	
Time, Inc.	47
Timken Roller Bearing Company	Back Cover
Truscon Steel Company, Subsidiary of Republic Steel Corporation	24

U	
Union Steel Castings, Division of Blaw-Knox Co.	45
Union Switch & Signal Company	34
Unit Truck Corporation	2

V	
Vapor Car Heating Co., Inc.	46
Viking Pump Company	49

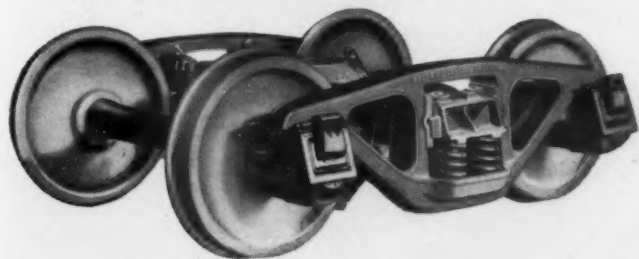
W	
Weirton Steel Co.	30
Westinghouse Air Brake Company	32
Westinghouse Electric Corporation	8, 9, 42, 43
Wine Railway Appliance Co.	Front Cover

Y	
Youngstown Sheet and Tube Company, The	44

An easy-riding freight-car truck at every speed and load should have long spring travel and proper control of spring action. Both of these needs are fully met by the A.S.F. Ride-Control Truck^(A-3), over 12,000 car sets of which are already in service or on order.

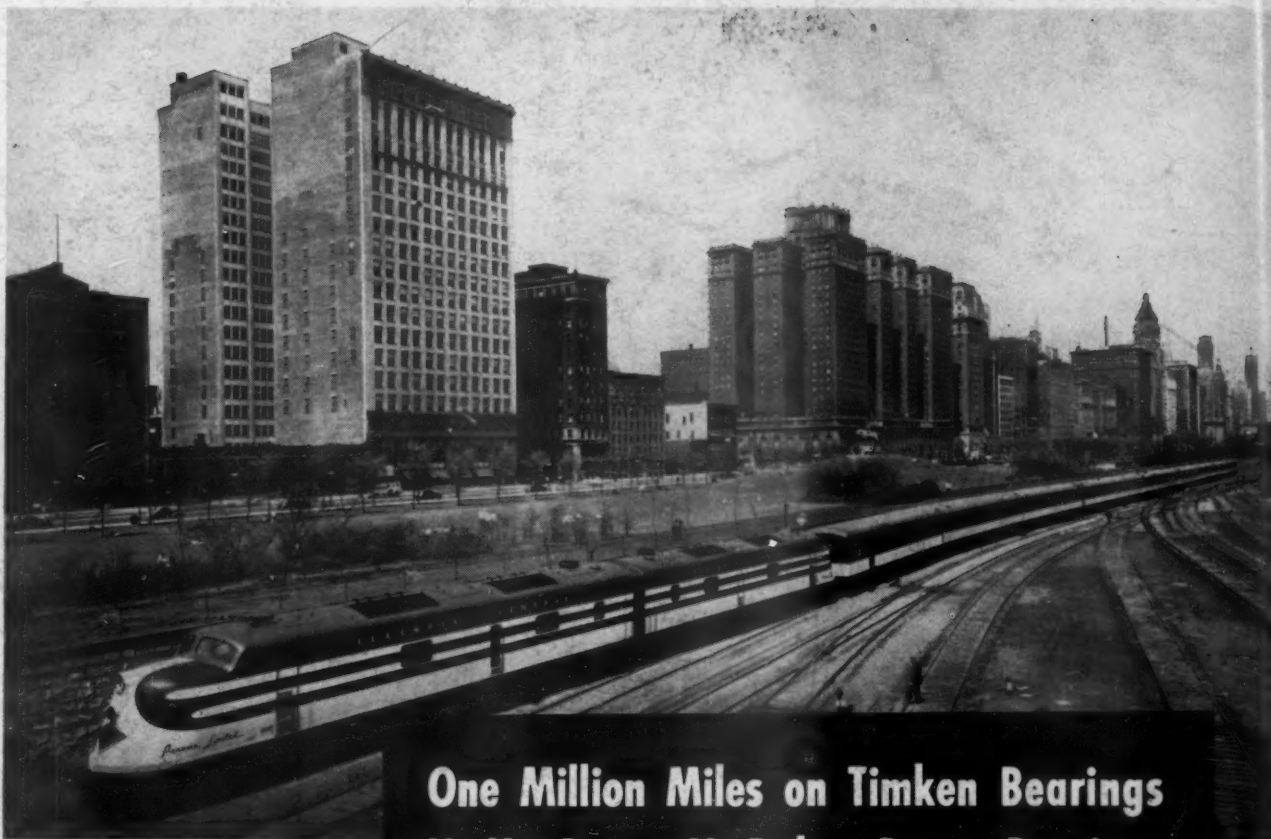
MINT-MARK OF  FINE CAST STEEL

A.S.F. *Ride-Control* TRUCK

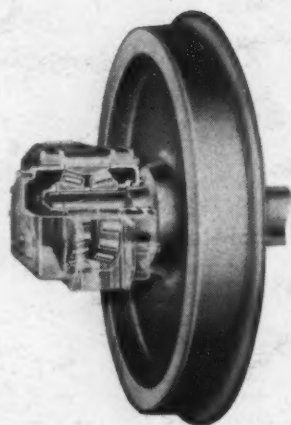


LONG SPRING TRAVEL • CONSTANT FRICTION CONTROL

AMERICAN
STEEL
FOUNDRIES
CHICAGO



One Million Miles on Timken Bearings No Hot Boxes-No Delays Due to Bearings



TIMKEN
TRADE-MARK REG. U.S. PAT. OFF.
RAILWAY ROLLER BEARINGS

The Chicago-New Orleans "Panama Limited" of the Illinois Central Railroad recently completed 3 years of service without a single hot box or delay of any kind due to journal bearings.

These two Pullman-built trains—youngest of America's sleeping-car streamliners—are equipped with Timken Roller Bearings on all car journals. Each car has gone 1,000,000 miles.

Meanwhile many other American streamlined trains, with many more years of service to their credit, continue to roll up phenomenal trouble-free mileages on Timken Bearings.

THE TIMKEN ROLLER BEARING
 COMPANY, CANTON 6, OHIO